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Original Articles

HEMORRHAGE IN THE NEWBORN *

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Hemorrhage in the newborn is either traumatic or spontaneous

Traumatic Hemorrhage—When hemorrhage occurs during the first twenty-four hours after delivery it is usually traumatic In the class of traumatic hemorrhages are to be included the following Cephalohematoma, hematoma of the sternocleidomastoid muscle, hemorrhage beneath the skin, intracranial, intra-abdominal and intrathoracic Intracranial hemorrhage, if extensive, causes death at birth, or the infant may breathe feebly for a few moments and die If less extensive there are no immediate symptoms, but paralysis later Intra-abdominal hemorrhage can usually only be surmised, and in an infant large and strong at birth, dying within a few hours, with evidences of shock, intra-abdominal hemorrhage should be suspected, but the diagnosis can be confirmed only by autopsy Hemorrhage of the lungs is certainly rare, but I have one case, reported herewith (Case 6)

Spontaneous Hemorrhage—In spontaneous hemorrhage the blood may be from any mucous surface or beneath the skin By combining the statistics of Ritter of Prague, Townsend of Boston, Abt of Chicago and those herein reported, the source of the hemorrhage is as follows Umbilical, 161, intestinal, 66, mouth, 49, stomach, 37, conjunctiva, 20, ears, 10, nose, 16, ecchymosis, 27, lungs, 1, vagina, 2 It should be understood that in many of these statistics the hemorrhage was from more than one point, but that the chief source of hemorrhage is mentioned

Duration—Almost all cases begin within the first ten days of life Of 75 cases reported by Dusser, the hemorrhage began on the first day in 24, on the second in 22, on the third in 9, and from the ninth to the twelfth day in 10 cases In the majority of cases nothing is noted as abnormal about the infant until hemorrhage appears As a rule, the amount of blood is not large but the danger to life resides in the fact that the hemorrhage is continuous

In reported cases the temperature varies It should be remembered, however, as pointed out by Holt that the temperature varies greatly in the first days of life in the normal child

Hemorrhage from the umbilicus usually begins later than hemorrhage from other sources Almost all cases from this source occur from the fourth to the seventh day, and nearly always after separation of the cord Cases of hemorrhage from the slipping of the cord during the first day of life are not included Hemorrhage from the umbilicus is almost always parenchymatous, very few cases of gush of blood being reported Cases may terminate fatally within twenty-four hours, and patients seldom live more than two or three days Roch, in the first edition of his text-book, however, reports one case where the oozing continued for 18 days, the child recovering This same infant was later on circumcised without undue hemorrhage occurring

Hemorrhage from intestinal canal usually occurs early, that is, within the first three days The blood, whether from the mouth, stomach or bowels, may be either dark or light in color

Hemorrhage beneath the skin consists of petechial purpuric spots or, in a few cases, of large hemorrhagic areas Hemorrhages from the bladder, as will be noted in the statistics, are very rare Slight hemorrhage from the kidneys, due to uric-acid infarctions, occurs in a few cases Hemorrhage from the ears is either from the external meatus or the middle ear Hemorrhage from the female genitals, when occurring alone, is not serious Cullingham has collected 32 cases of hemorrhage from this source with no deaths

Prognosis—Prognosis in hemorrhages of the newborn is very grave Townsend of Boston has collected 709 cases, with a mortality of 79 per cent In private practice each case should be a law unto itself and no case should be looked on as absolutely hopeless while life endures

Hemorrhage and Hemophilia—Hemorrhage in the newborn does not appear to bear any relation to hemophilia Grandidier has collected a series of 576 hemophiliacs, and in but 12 of these cases was there a history of bleeding in early infancy, so that patients that recover show no tendency to bleeding in later life

Hemorrhage in the newborn is a comparatively rare disease In the Boston Lying-in Hospital there were 32 cases out of a total number of 5,225 births, or 6/10 of 1 per cent In the Lying-in Asylum of Prague, in *13,000 births, there were 190 cases of hemorrhage or 1 4* per cent In the Foundling Asylum of Prague, reported by Epstein, there were 8 cases out of a total of 740 births

Etiology—The etiology is obscure, and hereditary syphilis is considered an important predisposing cause In 132 cases of syphilis reported by Mracek hemorrhage *occurred in 17, or 14 per cent In 13 cases carefully* studied by Abt, *there was a history of syphilis in only* 2, and the last several years at the Child's Saving Institute I have seen a number of cases of hereditary syphilis, but have not seen a case of hemorrhage in any of them

Hemorrhage in the newborn is probably due to some change in the blood or in the blood vessels That it is a specific condition seems entirely *probable from the fact* that it is more *frequent* in lying-in institutions than in private practice that it is a self-limited condition, terminating in death or a complete recovery, and that it does not tend to recur In hemorrhage in infants, after the first ten days of life, it seems entirely probable that septic infection is the usual cause

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* Read in the Section on Diseases of Children of the American Medical Association at the Fifty seventh Annual Session June 1906.

Treatment—The important principles of treatment in these cases are 1 To control the hemorrhage as far as this is possible 2 To aid the nutrition of the child in every way 3 To maintain body heat Details of treatment will appear in the report of the cases

Under the head of traumatic hemorrhage I report the following cases Cephalohematoma, 5 cases Three of these were seen in consultation The diagnosis is usually simple, and is based on the location of the tumor, the bony ring that forms around the periphery of the mass, and the absence of pulsation In one of these cases considerable deformity remained owing to the proliferation of bone cells In one of the cases seen last July an incision was made and the clot turned out This case made a prompt and rapid recovery I suggest the propriety of this treatment in this class of cases I have seen four cases of hematoma of the sternocleidomastoid muscle In one of these cases there remained for several months a slight torticollis due, as I believe, to the shortening of the muscle One case of cutaneous hemorrhage occurred in the left gluteal region and occupied an area of about four inches in diameter The mass of blood was gradually absorbed It was a slow breech presentation

CASE REPORTS

report the following cases of spontaneous hemor-

Dr Ewing Brown, and was seen Sept.
th Hemorrhage began at the
separation of the cord
ing I applied

I rep
rhage

CASE 1—Referred by D

18, 1898 Child normal at birth
umbilicus the sixth day of life after
When I saw the child there was constant oozing
a piece of absorbent cotton dipped in Monsel's solution, over
the entire abdomen I placed a mass of dough, held in place by
means of roller bandage The oozing continued and the child
died the following day from exhaustion In this case the tem
perature was subnormal and there was no evidence of sepsis

CASE 2—In this case umbilical hemorrhage began on the fifth day of life after separation of the cord When I saw the child the bandages of the body on which it was lying were soaked with blood I adopted the following treatment: A piece of cotton saturated in a 1 to 5,000 adrenalin chlorid solution This was packed in the umbilical fossa A thick piece of gauze 4 inches in diameter was dipped into a gelatin solution made by boiling Cox's gelatin in water until the solution was about the consistency of glycerin The gauze was thoroughly soaked in this solution and applied over the cotton This was retained in place by a roller bandage applied a number of times around the abdomen While this dressing all became saturated in the course of a few hours, the hemorrhage seemed to cease The dressing was left in place 36 hours and then removed There was no further hemorrhage and the child recovered

CASE 3—Patient was seen Aug 16, 1901, in consultation with Dr W L Curtis The child was normal at birth and nothing unusual was noted until it was 30 hours old, when, as the child was taken from the mother's breast, she noted a large clot of blood lying below the mammary gland

Examination—Examination revealed that this came from the child's mouth and not the mother's nipple I saw the child on the evening of the second day There had been some further oozing from the mouth and also two bowel movements containing blood The shock was not extreme The lips were fairly good color and we gave the parents some encouragement

Treatment—Patient was given adrenalin extract, one fourth grain every three hours Warm water bottles were placed to the extremities The mother's milk was drawn from the breast and fed to the infant with spoon, as we feared the act of suction might increase the hemorrhage from the mouth

There was one bowel movement the following morning containing a considerable amount of dark, clotted blood, but from the third day on the child continued to improve At the end of a week it began to gain in weight. In its second summer this child had a *protracted* course of bowel trouble from which it slowly recovered At the present time it is living and well

CASE 4—This child was seen at Fort Crook, and I quote as follows from the nurse's report "*Infant, female, born Oct 0, 1904*, weight, 9 pounds, healthy and vigorous When 24 hours old there were signs of prostration and the child gave occasional sharp cries When 30 hours old there was a profuse hemorrhage from the bowels containing some large clots of blood The feet were elevated, small doses of ergot given by mouth, adrenalin chlorid with salt solution by the rectum, plenty of water and nourishment given by the mouth Twenty four hours later another profound hemorrhage occurred with shock Pulse could not be felt Fontanels depressed. Respiration distinctly Cheyne and Stokes Small doses of bismuth with hydrastis were given by the mouth Normal salt solution was given by hypodermoclysis There was no temperature at any time, no tympany, no furt hemorrhage The child made a rapid recovery" This pati is now in my care for an umbilical hernia and has never h any hemorrhage and is in every way a normal child

CASE 5—This child was born prematurely The mother been under my care for some months before confinement went into labor on the morning of Jan. 5, 1905, and as it not possible for me to be with her during the day, Dr very kindly took charge of the case He reported to me la in the afternoon that the cervix was well dilated and the down on the perineum We met at the patient's house at o'clock and decided to apply the forceps Delivery was complished with very little difficulty

I left the patient in charge of Dr Ellis and did not see h again Dr Ellis reported to me as follows "The child, male, was born at 5 30 p m, Jan 5, 1905, normal presentation, forceps delivery, weight, 8 pounds The child cried
and appeared in every way normal There was great
the cord, as it h
the chi

very the hemorrhage from the
culty in controlling the hemorrhage during the first hour I saw
to be tied several times during the first hour I saw
again at 10 p m of the same night and found it bleedi
profusely from the mouth, death occurring within half
hour from the time the bleeding started from the mouth
can not say absolutely whether the hemorrhage was from th
lungs, stomach or mouth The blood was a bright color, how
ever" This case illustrates the fact that a child may simp
die from loss of blood within a very short time.

CASE 6—The following case (twins) was reported to m by Paul H Luddington, Omaha, Neb

Family History—One child living in good health, aged There has been no miscarriage Husband is apparently perfect health No specific history was obtainable

The case was uneventful except for the large amount liquor amnii Labor began at 11 p m, June 23, 1904 ress was normal At 3 45 a m a child was born, presentation, cord very thick In 15 minutes the child was born in foot presentation This child was slightl asphyxiated but easily revived A single placenta, usual d livery This patient did not expect to be confined until s weeks later, although the date was uncertain Children both males, weighing about 6 pounds each, perfectly formed

The following day both children were seen by me and a peared normal except weak and puny Seventy hours af birth the aunt of the children noticed one of them look cold and picked it up The child gasped, spit up a mouthf of bright red blood and died

Autopsy—Twelve hours after death Abdominal normal Head not examined Left lung entirely filled wit blood No blood in pleural cavity One section of lung with blood and very little air escaped Left lung normal

In this case it does not seem probable that the hem rhage could have been due to traumatism, but was sp taneous due to inherent weakness of vascular supply lung

DISCUSSION

Dr Isaac A Abt, Chicago, agreed with Dr McClanahan in his examination of cases It is pretty well established that all young infants have a tendency to bleed on rather slight provocation It can hardly be gainsaid that hereditary syphilis plays a certain rôle in the etiology of these hemorrhages Another etiologic factor is infection, either of the ordinary *pyogenic microörganisms*, the streptococcus, staphylococcus or even the colon bacillus This is particularly shown in clinics abroad The traumatic cases do not belong to the same class as those of spontaneous hemorrhage in which the hemorrhage is under the skin In his own cases he doubted whether the loss of blood was sufficient to cause death It seemed that the children died rather from the attending sepsis than from loss of blood In no case was loss of blood very marked, being more of an oozing of the mucous membranes, *kidneys and bowels*

Dr. J C. Litzenberg, Minneapolis, reported a case of hemorrhage from the mouth and bowels 36 hours after birth and showing symptoms of extreme prostration which he did not think due to the amount of hemorrhage The child died when 0 hours old A postmortem was held and careful bacteriologic examination made From the cardiac opening of the stomach to the rectum were small submucous hemorrhages gradually growing larger as the small and large intestines were dissected through into the rectum The bowel itself contained a quantity of blood, and the bacteriologic findings of cultures taken from the hemorrhagic spots showed a pure culture of the bacillus of Friedlander He thought the real cause of death, as the last speaker said is often the case, was not the amount of hemorrhage, but the sepsis, because a lobular pneumonia was found in which was a pure culture of the bacillus of Friedlander

Dr Malinda K Germann Quincy, Ill, reported a case of fatal hemorrhage in a child The delivery was slow, but there was nothing abnormal about the labor Immediately after birth, however, the child had a profuse hemorrhage of the nose and mouth The cause was probably in some inherent abnormality of the vascular system of the lungs, for Dr llermann believed death was caused by the hemorrhage

Dr Effa Davis, Chicago, called attention to toxemia in the mother as a cause of hemorrhages in the new born The toxemias of pregnancy are so varied and often of such mild degree that a careful inquiry must be made to ascertain their presence previous to the delivery, but knowing how profoundly the child may be affected by such a condition, even to the point of death *in utero* it is worth while to inquire along this line in otherwise puzzling cases Dr Davis has seen several which she attributed to such a condition

Dr McClanahan believed that the majority of the deaths are not due to the loss of blood, *but to the septic condition* which induces hemorrhage, although in two cases he had reported that death was due to the hemorrhage Unfortunately bacteriologic tests were not made and he, therefore, did not allude to that subject. He is rather inclined to limit the cases of hemorrhage in the new born in which death is due to the loss of blood Again, while the loss of blood may not seem dangerous to life yet the condition may be exceedingly dangerous because of the probably infectious nature of that which produced or induced the hemorrhage

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Submucous Septal Resection —Mouret and Joubert, in their *report on the treatment of septal* deviations to the French Society of Laryngology (*Arch Internat de Laryngologie, etc*, xxi No 3, suppl, May June 1906), hold that *among* all the operative methods *only* one is adaptable to all cases, namely, the submucous resection If not *done too timidly* and if all the deviated portions are removed it gives invariably an excellent result and it is the only procedure applicable to deep osseous deviations They consider the operation delicate and laborious, but they say that it is easily borne by the patient and gives a perfect result as regards nasal permeability It also corrects from an esthetic point of view certain external deformities and is generally as well adapted as any other method

BENIGN CYSTIC EPITHELIOMA

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Benign cystic epithelioma has been reported under a variety of titles, all of which were designed to describe, more or less closely, the pathologic changes of the individual case under consideration, or to describe the views held by the individual making the report Cases of cutaneous epithelium have been described under a variety of captions, and among these titles are to be found hydradenoma, hemangio-endothelioma, syringocystoma, epithelioma adenoid cystium (Brooke[1]), tricho-epithelioma (Jarisch[2]), akanthoma adenoides cystium (Unna) and benign cystic epithelioma (Hartzell[3]) Following the suggestions of these writers, White,[4] Balzer and Ménétrier,[5] Balzer and Grandhomme,[6] Phillippson,[7] Wolters[8] and Hartzell[3] have added examples of this clinically benign form of epithelioma From the literature[9] we have been able to collect references to but twenty-four reported cases and special articles discussing benign cystic epithelioma

Patient—Miss J E, *aged* 22 *American, complained* of no subjective symptoms, her appetite had always been good and *the bowels regular* She first menstruated when 13 years of age and her menstrual periods have been regular since, not painful, and of the 28-day type

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1 Brooke "Epithelioma adenoides cystium Monats. f prakt. Derm., 1892, vol. xv, p. 589

2 Jarisch Zur Lehre von den Hautgeschwulsten" Archiv f Derm. u Syph. vol xxviii p 163

3 Hartzell 'Benign Cystic Epithelioma, Amer Jour of Med. Sci., Philadelphia, September 1902

4 White Jour of Cutaneous and Genitourinary Diseases, 1894 p. 477

5 Balzer and Ménétrier Archiv de physiol 1885

6. Balzer and Grandhomme ibid. 1886

7 Phillippson Die Beziehungen des Kolloidmilium (M Wagner), der kolloiden Degeneration der Cutis (Besnier) und des Hydradenoms (Darier Jacques) zu einander Monats. f. prakt. Derm vol xi, 1890 No 1

8 Wolters 'Epithelioma adenoides cystium, Archiv f Derm u. Syph, vol lvi, 1901 p 90

9 In addition to the authors cited in the article other references may be consulted as follows Jaquet de Darier Annal de Derm et Syph 1887 vol xi No 8 *p* 317 Quinquand Congrès international de dermatologie de Paris 1889 and Monats f prakt. Derm vol ix, p 20, Török Das Syringocystadenom Monats. f prakt Derm, vol viii p 116 Hoggan Zur pathologischen Histologie der schmerzhaften subcutanen Geschwulst Virchow's Archiv vol lxxxii p 233 and Jour of Anat and Phys 1884 Petersen Ein Fall von multiplen Knäueldrüsengeschwulsten unter dem Bilde eines Nävus verrucosus unius lateris" *Archiv f Derm* u Syph 1892, vol xxiv p 919 and Beiträge zur Kenntniss der Schweissdrüsenerkrankungen" ibid., 1893 p. 441 Bernard Contribution à l'étude du syringocystadénome" Thèse de Paris 1897 Knauss Eine Geschwulst der Schweissdrüsen (Cylinderepitheliom) Virchow's Archiv *vol cxxvi p 561 Bartel Ein Fall* von Cystadenoma papilliferum der Schweissdrüsenausführungsgänge mit *Hypertrophie* and cystenbildung der Schweissdrüsen selbst *Zeitft f* Heilk 1900 vol xxi (new series vol 1) Division for Pathologic Anatomy p 200, Wolters "Haemangioendothelioma tuberosum multiplex n s w' Archiv f *Dermat u Syph.*, vol liii 1900 Fordyce Multiple Benign Cystic Epithelioma of the Skin" Jour of Cutaneous and Genito-urinary Diseases 1892 p 459 Verneuil "Etudes sur les tumeurs de la peau et quelques maladies des glandes sudoipares" Archiv gén d méd 1854 vol iii pp 447 and 693 Lotzbeck Virchow's Archiv vol xvi p 160 Thierfelder Ein Fall von Schweissdrüsen Adenom" Archiv f Heilk. vol xi, 1870 p 401 Lücke *Handbuch der Chirurgie* Pitha Billroth" vol ii part 1 p 270 Perry Sweat Glands Atlas of Rare Cutaneous Dis

Family History—Her parents and brother and sister are living and in good health Her maternal grandparents are both living and well, and are about 80 years old. The paternal grandparents both died at 80 years of age, cause of death, senility Her uncles and aunts are all living and well A second cousin died of phthisis The family history is negative so far as carcinoma is concerned

Previous Personal History—As a child she had measles, whooping cough, and varicella, she has always enjoyed good health since until her present trouble

Social History—She is single and lives with her parents In June, 1905, she graduated from a woman's college, since which date she has spent her time in reading and doing some housework Her habits are good

Present Illness—This illness dates back about four years when she first noticed a pigmentation in the right infraclavicular region, and but slight pigmentation on the right arm, which has noticeably increased during the past two years She is uncertain as to whether or not the nodules were present at first At times, especially after violent exercise, she has had a slight itching sensation along the courses of the pigmentation The skin overlying these pigmented areas is hypersensitive

Physical Signs on Admission—An examination shows a female fairly well developed, five feet four inches tall, weight 115 pounds The skin over her body is warm and moist In the right infraclavicular region is a congregation of nodules which extend like a chain of enlarged lymphatic glands to the shoulder, and down the arm and forearm These nodules on the arm feel hard and are of the size of a pea, and the skin along this area is pigmented, the color being dark red or purplish There is also a similar spot of pigmentation in the infrascapular region of the same side, but no nodules are palpable Otherwise, the glands are normal except in the post cervical region of the left side where there is one gland the size of a marble

Chest Inspection, palpation, percussion and auscultation revealed no additional abnormalities except that the heart's second pulmonic sound is short and sharp in character

Abdomen Nothing abnormal could be elicited

Clinical Laboratory Findings—The urine was of high color, specific gravity 1022, moderately acid in reaction, and gave evidence of a trace of indican, and contained a small number of cylindroids There was no evidence of disease of the kidneys, nor of imperfect elimination through these organs

First Blood Examination Hemoglobin, 75 per cent , red cells, 3,800,000 per c mm , white cells, 8,600 per c.mm

Stained Blood All red cells stained feebly and were deficient in hemoglobin Few red cells were distorted (poikilocytes) Many red cells were under size (microcytes) A few red cells appeared as shadows except for a marginal band of stained tissue There was no basic or other degeneration of red cells Leucocytes stained normally

Differential count showed the following percentages Polynuclears, 66 per cent , lymphocytes, 30, eosinophiles, 0 5, large mononuclear, 2 5, transitionals 1 0

Second Examination—Blood examination made three weeks later gave Hemoglobin, 75 per cent., red cells, 3,100,000 per c.mm , white cells, 10,600 per c mm.

Living blood showed rouleaux formation feeble, and the viscosity greatly reduced The red cells were disseminated throughout the plasma, many of them swollen, pale and at times distorted

The stained blood revealed a faint staining with eosin, many of the red cells stained as mere shadows, while some of the larger erythrocytes displayed a central area surrounded by a peripheral band of well stained protoplasm The central pale spot was enlarged in all the red cells Few of the red cells showed punctate areas of degeneration (punctate basophilia) Poikilocytosis was well marked

Differential leucocyte count showed the following percentages Polynuclear cells, 67, lymphocytes, 24, large mononuclear, 1.5, eosinophiles, 2 0, transitional, 5.5

Third Examination—An examination of the blood six weeks after treatment was established showed Hemoglobin, 86 per cent., red cells 3,800 000, white cells 4,600 Rouleaux formation was slightly below the normal Red cells were somewhat pale, and showed but slight abnormalities in size and shape.

Stained Blood The red cells stained feebly as a rule, and different portions of their protoplasm stained irregularly, but there were no over stained cells A differential count showed the leucocytes to be normal both as to staining properties and varieties

The general features of the blood were that of a moderate grade of secondary anemia At the first examination it was found to concern mostly the hemoglobin, yet the red cells suffered some reduction. The third examination of the blood, which was made six weeks after the institution of treatment, showed a decided improvement in the general blood condition

Histologic Examination of Growths—A tumor about the size of a hazel nut was taken from the skin of the anterior surface of the right chest Microscopic examination of the tumor disclosed the fact that the surface displayed the usual characteristics of epidermis, except that it was slightly hypertrophied. The corium presented decided deviation from that of normal skin, and this condition involved both the reticular and subcutaneous layers There were to be seen numerous small, irregular and at times oval aggregations of deeply stained cells (tumor cells), many of which were small round cells, others contained spindle cells These masses of deeply stained cells were found to vary greatly in both size and form, some being oval, nearly round, elongated, while those situated near the hair follicle showed this feature to a less marked degree. Often these cells were seen to extend for some distance along the septa of connective tissue, and in some of the growths these slender tracts of epithelial cells extended out in finger like projections through the fibrous stroma In a few of the masses the marginal epithelium appeared to be more or less imperfectly columnar, although this feature was never prominent.

Source of Growth—Study of these epithelial cells under a 1/12 oil immersion objective showed them to be indistinguishable from the cells of the deeper layers of the epidermis In many of the sections studied hair follicles showing abnormal growths were demonstrable At times this growth of epithelium was seen to branch directly from the sides of the hair follicle, this branching taking place near the junction of the upper with the lower two-thirds of the follicle, and it was common to find a direct communication between finger like projections of the epithelial cells and other portions of the hair follicle At the bulbar portion of the hair follicles there were often decided proliferations of the epithelium of the follicle, and there were to be seen finger like projections which appeared to be formed of the younger cells

In the immediate vicinity of the follicles showing proliferation of their epithelium were older growths These masses of epithelium at times encroached on the sebaceous glands, but it was impossible to demonstrate any connection between the new growths of epithelium and the glandular tissue

Second Study of Growths—In view of the great rarity of epithelial growths originating from the hair follicles it was deemed advisable to remove a second small tumor from the skin and to study it in serial sections and this was accordingly done, forty sections being studied Through this latter method of study it was possible to follow growths of epithelium to the hair follicles This second study revealed several small cysts and in one instance a cyst apparently expanded the bulbar extremity of the hair follicle Other findings were corroborative of those described in the first specimen This tumor showed the aggregations of epithelium to be larger than did the first specimen examined, and the columnar arrangement of the cells was less apparent

Deductions—From the above findings it appears self evident that these neoplasms originated from the hair follicles and exemplify what has previously been described as tricho-epithelioma These benign tumors of the skin have received but little study by general pathologists

DISCUSSION

In most of the cases furnished by the literature small cysts have formed a prominent feature of the tumor masses, but in our case only few cysts were detected, and this may be explained through the fact that these growths were extremely young, having existed but a few months

In Hartzell's case[10] more extensive cyst formation appears as the only striking difference between the findings he describes and those presented by our case

The microscopic findings in our case were practically identical with those described by the other writers In discussing the subject of benign epithelioma Hartzell[10] states

> Either neoplasms differing widely in origin and nature may resemble one another so closely histologically as to be practically indistinguishable, which is unlikely, or those who believed that they were able to trace the origin of these growths to the sweat gland ducts or to the blood vessels based their conclusions on insufficient evidence.

We desire to thank Dr Hartzell for making an examination of some of the sections from the case herein reported

Perthes[11] has described, both clinically and histologically two cases, each of benign cystic epithelioma of the lip in the Chinese It has been also demonstrated that clinically benign neoplasms of the skin orginate both from the deeper layers of the cutaneous epithelium and from the hair follicles

A STUDY OF THE BLOOD IN BANTI'S DISEASE BEFORE AND AFTER SPLENECTOMY *

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The patient on whose case this study is based was admitted to the University Hospital, Nov 15, 1904, and presented the following history

Patient—Mr C F H., aged 38, traveling man, married, having 3 children in good health, was referred by Dr W E Patterson and entered the hospital complaining of feeling of heaviness in abdomen with bloating after meals

History—Father died at age of 72 years from hernia, mother aged 72, alive and well, three sisters alive and well, one brother died, aged 44, of typhoid fever

Patient used alcohol moderately until beginning of present illness, tea and coffee moderately He has had gonorrhea a number of times, denies lues, had common diseases of childhood He had spinal meningitis at 7 years of age While in the South, at the age of 21, he had malarial fever, paroxysms ocurring, as he claims, only once a week. These symptoms persisted for 3 or 4 years, or until patient moved to Colorado, when they soon ceased and have not recurred There was no history of ague-cake spleen Patient was jaundiced at the time In 1890 an abscess developed on the left side of chest, which was opened, and failed to close for one year, healing and breaking out in different points on the surrounding area

History of Present Trouble—In 1902 patient began to feel depressed, had aching and heavy feeling in the left side, with a sharp pain under the ribs on exertion, continued to work, but nearly fainted a number of times At Christmas, 1902, his wife first noticed a tumor on the left side of the abdomen Soon after this the patient consulted Dr Gilchrist of Iowa City, who made a diagnosis of splenic tumor In September, 1902 the patient went to Chicago and received several *x*-ray treatments, but without help, and developed a painful burn on left side of the abdomen over enlarged spleen area, which has not yet healed, but is no longer painful During the last two years patient had done no work and, except for burn, has felt fairly well His appetite is good, bowels are regular and he sleeps fairly well On exertion he tires easily and suffers with dyspnea There is no hematemesis, but he has frequent attacks of nosebleed, although these have been present more or less since youth In April, 1904 he had a marked distension of the abdomen for 3 days, for which paracentesis abdominis was advised but not carried out

Present Condition—Nov 15 1904 Patient is moderately emaciated, has some cachexia skin is slightly yellow, sclera is jaundiced, pulse 94, regular fair tension vessels soft and elastic, systolic pressure 110, heart's area not increased soft systolic murmur heard over entire pericardium otherwise sounds are normal Lungs are normal

Abdomen is distended especially in left upper quadrant. There is a diffuse scar on left side the center of which is unhealed, palpation reveals a large tumor on left side of abdomen which corresponds to the spleen the lower border of which extends 10 5 cm below umbilicus level and the right border 8 5 cm beyond the midline The surface is smooth except the right border which is deeply notched The liver is distinctly palpable surface not tender but irregular Small amount of free fluid in the abdomen Kidneys are not palpable, urine is negative There are no enlarged lymph nodes

Blood Hemoglobin, 65 per cent (v Fleischl), red cells 2 798,800, whites 3 680 Differential count of leucocytes Polymorphonuclear neutrophiles, 75 5 per cent small mononuclears, 16 per cent, large mononuclears, 3 3 per cent., eosinophiles, 2 63 per cent, transitionals 1 12 per cent mast cells 37 per cent, indeterminates, 93 per cent Daily examinations of the blood were made for 12 days without disclosing any marked change

Diagnosis—The splenomegaly, leucopenia and secondary anemia permitted a diagnosis of splenic anemia, but the mild icterus, suspicion of ascites and hepatic cirrhosis, which was subsequently corroborated at the operation for splenectomy, made a diagnosis of so called Banti's disease seem more applicable

Operation—On Nov 28, 1904, a splenectomy was performed by Dr William Jepson At the operation the liver was found to be enlarged, surface granular and marked by deep irregular scars About 500 c c. of clear serous fluid was removed from the abdominal cavity Recovery from the operation was uneventful

Postoperative History—The blood changes following the operation were closely followed Five days after operation there was a total white count of 15,400 and from this time until December 10, 12 days after operation there was a steady increase except for two slight variations in the white blood count, which reached 24,000 on December 10 It fell suddenly to 10,200 on December 14 On December 17 there was a slight increase in the count, showing 14,000 From then on there was a steady decrease On the day of discharge Jan 4, 1905, the total white count was 6,000

Red Blood Corpuscles Immediately following the operation there was a sudden fall reaching 3,120 000 on December 3 5 days after operation From this time on there was a steady uniform increase up to December 21, when the count was 4,200,000, higher by 1,500 000 than on admission On January 4, the day of discharge, the count was a trifle less than on December 21, but still over 4 000 000

Hemoglobin The hemoglobin on admission was 65 per cent estimated by the v Fleischl instrument It ran a course parallel with the erythrocytes, and the day of discharge showed 85 per cent

Differential Counts Five days after operation a count showed the following Polymorphonuclear neutrophiles 72 per cent, small mononuclears 11 4 per cent, large mononuclears, 15 per cent eosinophiles, 1 per cent This count is of interest as it shows the great increase in relative numbers of the large mononuclears from 3 3 per cent before operation to

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[10] Hartzell Benign Cystic Epithelioma and Its Relationship to So-called Syringocystadenoma Syringocystoma and Hemangio-Endothelioma Brit Jour of Dermatology October 1904 p. 301

[11] Perthes Ueber gutartige Epitheliome, wahrscheinlich congenitalen ursprungs, Deuts. Zeitft f Chir 1905-1906 p 283

* Read in the Section on Pathology and Physiology of the American Medical Association at the Fifty seventh Annual Session June 1906

15 per cent 5 days after operation There is a falling per cent in the number of small mononuclears and polymorphonuclears

December 6 a count revealed Polymorphonuclear neutrophiles, 65 4 per cent., large mononuclears, 15 7 per cent., small mononuclears, 12 7 per cent , polymorphonuclear eosinophiles, 3 5 per cent , transitionals, 2 1 per cent , mast cells, 0, indeterminates, 43 per cent , 697 cells counted This count shows a marked increase in large mononuclears, a slight increase in eosinophiles and transitionals, and a decrease in polymorphonuclear neutrophiles and small mononuclears, with total absence of mast cells

On December 10, the day of the highest leucocytosis, a strange phenomenon was noticed. The small mononuclears suddenly increased from 12 6 per cent in the previous blood count to 23 5 per cent., the large mononuclears fell from 15 7 per cent to 8 1 per cent, the count being as follows Polymorphonuclear neutrophiles, 65 4 per cent , polymorphonuclear eosinophiles, 3 5 per cent , small mononuclears, 23 5 per cent , large mononuclears, 8 1 per cent , mast cells, 0, indeterminates, 0, 429 cells counted. The subsequent changes in the different blood elements are revealed in the table

TABLE OF BLOOD EXAMINATIONS

Date	Hemoglobin %	Red	White	Polymorphonuclears %	Small mononuclears %	Large mononuclears %	Eosin %	Transit. %	Mast %	Nucl red	No of white cells counted
11/15 04.	65	2 789 000	3 680	75 5	16	3 3	2 63	1 12	.37	1	420
11/26 04	65	3 416 000	4 800	75 5	16	3 3	2 63	1 12		1	560
11/28 04	Splenectomy										
11/30, 04	60	2,820 000	13 200	50 1	12.6	9.8	1 15	1		1	620
12/2 04	65	3 120 000	15 400	72	11 4	15	1			1	540
12/6 04	75	3 645 000	18 000	65 4	12.7	15 7	3 5	2 1		1	697
12/10 04	75	3 520 000	24 000	65 5	23 5	8 1	3 4			1	429
12/14, 04	70	3 632 000	10 200	60 6	20 6	11 8	4.4	1 6	46	1	432
12/17 04	75	3 864 000	14 000	65	21 1	10 7	1 2	25	12	1	780
12/21 04	80	4 300 000	12 120	63 2	19 6	11 2	2 1	32		1	500
12/28 04	80	4 180 000	48 600	64 8	20	11 6	1 8	48	18	1	480
1/2, 05	85	4 165 000	7 100	63 6	26 2	9 4	2.4	1 2	24	1	450
1/4 05	85	4,120 000	6 000	60.2	24 6	10 8	2 9	42		1	510
9/25 05	75	3 820 000	6 800	64 4	22 4	10 4	2.8				420
9/28 05	75	3 910 000	7 100	61 8	24 8	9 2	3 2			1	620
5/5 06	65	4 288 000	12 000	46 7	36 1	8 2	2.1		1	1	304
5/8, 06	70	4 608 000	11 000	47 1	38 5	8 07	4 9	45	9		228

When he appeared at the hospital for examination, in September, 1905, his general condition was much improved, but he was distressed by a discharging fistula at the site of a drain placed in the left side of the abdomen at the time of the operation After receiving surgical treatment for this condition he returned home

He was readmitted May 2, 1906, at which time his general health appeared good, but he was troubled by a marked distension of the abdomen Examination revealed a high degree of ascites present, and 1,400 c.c. of clear serous fluid was removed May 8, 1906 Although the number of white cells in the last count has increased to 11,000, the lymphocytosis still prevails At no time has an enlargement of the lymph nodes or changes in the thyroid gland been observed

REMARKS

Summarizing the results obtained in the study of the blood of our patient, we have, first, before operation, blood characterized by anemia of secondary type, low per cent of hemoglobin and leucopenia, second, after splenectomy a slight fall in red cells, then a rise, a leucocytosis reaching its maximum twelve days after operation and characterized by a relative increase in the mononuclear leucocytes, especially the large mononuclears, third, the absence of myelocytes and the scarcity of nucleated reds, both before and after sphlenectomy

The blood examination in the case under consideration having been described, it may be of interest to make comparison with the findings of others Most observers have noticed a decrease in erythrocytes immediately after operation, but Jordan[1] states they may increase as frequently as decrease What the factors are that bring about the change can not be definitely stated White says that, as a rule, after laparotomy of any kind, there is a slight increase of white blood cells and a decrease in the red cells, apparently due to ether

LITERATURE

The reported cases of splenectomy, as a rule, show a leucocytosis following the operation Although there is a general increase of all the different kinds of white elements normally present in the blood, most of the cases show a relatively larger increase in the lymphocytes In this case the large mononuclear leucocytes showed relatively the greatest increase A number of observers have noted that a year or two after splenectomy the eosinophiles will show an increase in numbers The hemoglobin follows the variation in reds very closely Splenectomy is followed by an increase in size of the lymphatic glands, and this may possibly explain the lymphocytosis so frequently seen Some report enlargement of the thyroid gland and hyperemia of the bone marrow

The blood findings in our case, before splenectomy, of 3,796,000 red cells, 3,680 whites and hemoglobin 65 per cent, is typical of those usually described in connection with splenic anemia In Osler's[2] series of cases the average was 3,425,000 red cells, 4,250 whites and 47 per cent hemoglobin, nucleated reds and myelocytes being rare The differential counts of uncomplicated cases in Lossen's[3] summary show nothing of significance Of the 20 cases of Banti's disease reported as such by Banti,[4] Osler,[2] Cohen and Rosenberger,[5] Taylor,[6] Bessel-Hagen,[7] Umber,[8] Kausch,[9] Pribram,[10] Chiari,[11] Moor,[12] Roger,[13] Kast,[14] Galvagni[15] and Lossen[3] the blood findings are typical of those of splenic anemia

The more interesting blood findings seen after splenectomy are also essentially the same in the two disease conditions Umber[8] has reported one of the most typical cases of Banti's disease, having had the opportunity of observing the patient a long time, while it presented the characters of a splenic anemia, and then with the symptom complex of Banti before and after splenectomy, noted a blood finding before splenectomy of hemoglobin 45 per cent, red cells 2,483,000, white cells 8,000, leucocytes proportionally normal Soon after the operation an increase occurred in the number of red and white cells and hemoglobin percentage Three months following the splenectomy the hemoglobin was 90 per cent, red cells 4,578,000, white cells 11,700, the polymorphonuclear leucocytes remained about the same, the lymphocytes diminished at first, then increased beyond the normal, after which they gradually dropped to normal proportions The eosinophile polymorphonuclears varied from 1 4 per cent to 5 per cent and at the last count 66 per cent The late eosinophilia noted in our case and usually observed after splenectomy is no more characteristic of splenic anemia than Banti's disease and is not necessarily always a postsplenectomy phenomenon

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[1] Jordan Grenzgeb d. Med. u Chir 1903 vol xi

[2] Osler Am Jour Med Sci, 1900 January also Edin Med. Jour, 1899 p 441

[3] Lossen Grenzgeb der Med u Chir, xiii 1904

[4] Banti 'L Anæmia Splenica, Florence, 1882 also Ziegler's Beitr z path. Anat vol xxiv 1898

[5] Solis Cohen and Rosenberger R. L. Trans. Coll Phys., Philadelphia, vol xxvi.

[6] Taylor Lumleian Lectures 1904

[7] Bessel Hagen Archiv f klin Chir vol lxii p 168

[8] Umber Ztschr f. klin Med, vol xxv 1904

[9] Kausch Jahresber d. schles Gesell f. vaterl Kult., 1902, p 286

[10] Pribram Prager med. Wochschr 1902 No 9

[11] Chiari Prager méd. Wochschr 1902 No 24

[12] Mohr Berl klin Wochschr 1903, No 46

[13] Roger Presse Méd 1904 No 57

[14] Kast Wien med. Wochschr 1903

[15] Galvagni Clin Med, vol xviii No 17

v Decatella and Hoffbauer[16] report a case of splenic anemia with marked leucopenia and an eosinophilia of 4 3 per cent Pribram[16] notes in a case of Banti's disease in which splenectomy was not performed 3 per cent of eosinophiles, and Lossen[3] reports as high as 10 per cent in a case before splenectomy

As to the significance of these various blood changes one is mindful of the fact that in hypertrophy of the spleen from whatever cause a decrease in hemoglobin, in erythrocytes, and in many cases in the white corpuscles is very likely to follow How this leucopenia is produced is difficult to explain from our present knowledge of the hematopoetic function of the spleen

The explanation for the secondary anemia accompanying splenic hyperplasia rests as yet more or less on a hypothetical basis Harris and Herzog[17] advanced the explanation that the great increase in endothelium in the venous capillaries is associated with destruction of the erythrocytes, possibly by means of the production of a chemical substance These histologic changes have been observed only in a few instances, so that they can not be regarded as typical of the diseased condition

The favorable results following splenectomy in both splenic anemia and Banti's disease speak in favor of the spleen being in some way the cause of the poor blood condition seen in these diseases

The lymphocytosis noted following splenectomy must be regarded as an attempt at compensation In making a summary of all splenectomies recorded Stachelin[18] found in spleen disease reports, but very few cases in which it did not appear either sooner or later

Eosinophilia is usually noted sooner or later in human splenectomies A high grade eosinophilia has been produced experimentally by Ehrlich and Lazarus[19] in splenectomizing guinea-pigs

If the eosinophiles are to be regarded as having their source in bone marrow, the scarcity of myelocytes and nucleated red cells rather points against any great compensatory activity on the part of the marrow in the disease in question

In considering the blood findings of the two diseases splenic anemia and Banti's disease, before and after splenectomy, one is led to the conclusion that, whatever the nature of the disease process or the causative influence, the blood-forming organs are not particularly concerned The more likely points of attack are the vascular channels and tissues of the spleen and in time also those of the liver

DISCUSSION

Dr Maximilian Herzog, Manila, P I, said that for several years he had a chance to examine the blood of a patient in whom a splenectomy had been performed for splenic anemia In this case the eosinophilia became very marked after the splenectomy, and persisted for years Dr Herzog does not know what finally became of the patient A typical eosinophilia is not always produced in animals after splenectomy Dr Herzog said that during the last two or three years he has splenectomized the white rats of three successive generations The object of this work was to produce certain well characterized blood changes and to find out whether or not such an *acquired change* could be inherited by the offspring One of the most important questions in biology is whether or not acquired properties can be inherited Since the blood changes in the splenectomized rats were not very constant and characteristic, nothing came of this work Physicians, he said, are still in the dark as to Banti's disease. Dr Herzog called attention to the fact that splenomegaly, with or without cirrhosis of the liver, is very common in the tropics, and he has seen many cases among his postmortem material encountered during the last two or three years in Manila He referred, he said, only to cases in which there was neither a *malarial nor any other* well defined basis explaining the condition of the spleen or liver After ruling out such well understood cases, there still *remain many of splenomegaly* for which no etiologic explanation can yet be offered The etiology of Banti's disease remains as mysterious to day as it has ever been

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VITAL POINTS IN THE TECHNIC OF SUPRAPUBIC ENUCLEATION OF THE PROSTATE FOR BENIGN ENLARGEMENT OF THAT GLAND *

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It is generally conceded that, step by step, the operation of enucleation of the prostate from its capsule, whether performed suprapubically or perineally, has justly attained the recognized rank of a curative procedure for that urinary obstruction and destruction which is caused by benign enlargement of the gland

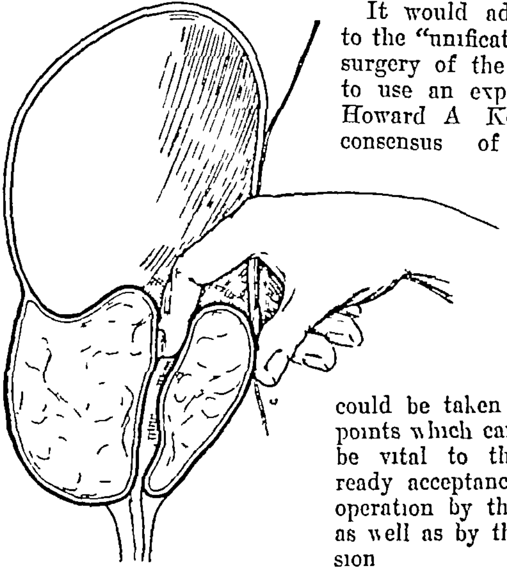

Fig 1 —Finger entering prostatic urethra.

It would add greatly to the "unification of the surgery of the world"—to use an expression of Howard A Kelly—if a consensus of opinion could be taken on three points which can not but be vital to the future ready acceptance of this operation by the patient as well as by the profession

My own experience, which, I may state, is both large and varied and dates from the time when I was taught prostatectomy by McGill of Leeds, in 1890, forces me to the conclusion that our suprapubic technic for prostatic enucleation is faulty in three directions, and *these form the three points, I venture to suggest,* should be carefully discussed and pronounced on by the surgical section *of this association* I submit *that our* present technic tends (1) to the destruction of the vesical *orificial* ring, (2) *to the wholesale destruction of* the prostatic urethra with its afferent seminal ducts, (3) to the rough manipulation of the membranous urethra

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[16] v Decatella and Hofbauer Ztschr f klin Med vol xxxix 1900

[17] Harris and Herzog Deutsch Ztschr f Chir vol lix p 507

[18] Stachelin Deutsch Arch. f klin Med. 1903

[19] Ehrlich and Lazarus Nothnagel's Specialla Path u Therap vol viii

* Read in the Section on Surgery and Anatomy of the American Medical Association at the Fifty seventh Annual Session June 1906.

1 I submit that, no matter how the operation of removal is carried out, whether from above or below, the original vesical orifice must be left intact and covered with its own mucous membrane I assert that in a certain proportion of cases, a neglect of this simple axiom will inevitably lead the patient with a narrowed or warped vesical orifice due to cicatricial contraction with its attendant miseries and perhaps dangers

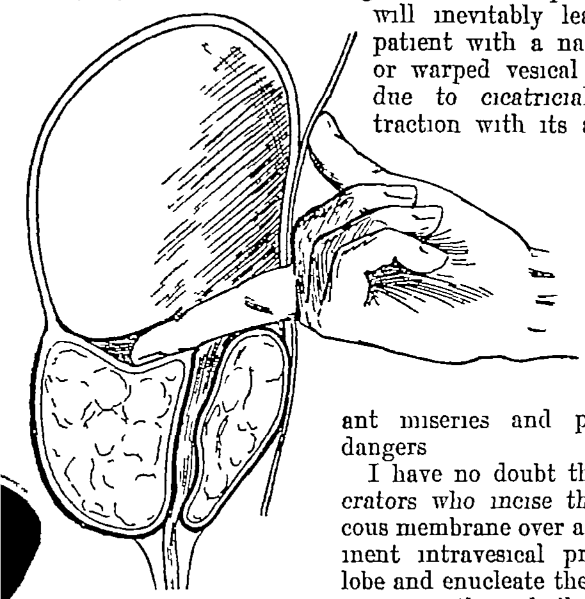
Fig 2—Finger pushed sideways through wall of prostatic urethra.

I have no doubt that operators who incise the mucous membrane over a prominent intravesical prostatic lobe and enucleate the gland *en masse* through this incision remove the entire vesical ring, ablate the prostatic urethra and pull out or destroy the ejaculatory ducts in a very large proportion of cases They assert that this is not so, and point to the permanent urinary success of the procedure But I submit that in successful cases the operator has been dealing with large intravesical projections, covered by a stretched and redundant mucous membrane, and that a big flap of this detached mucous membrane drops into the prostatic cavity and does duty as the prostatic urethral mucous membrane, and but little harm is done to the vesical orifice In such cases—to use a golfing expression—"the turf is replaced"

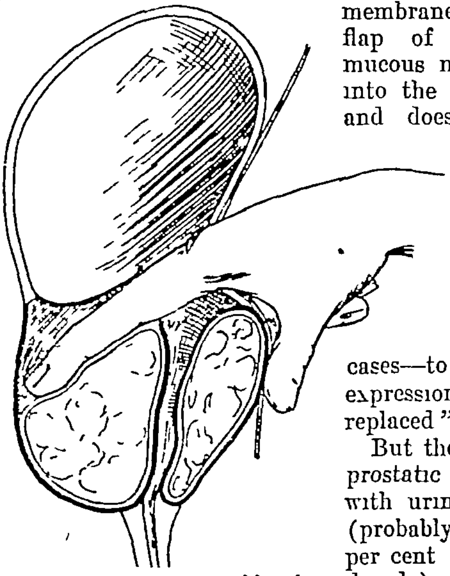
Fig 3 — Finger pushing between capsule and gland

But there is a class of prostatic enlargements with urinary obstruction (probably forming 30 per cent in the 50 to 60 decade) in which there is little or no intravesical projection and, therfore, no redundant mucous mebrane at the base There is, therefore, "no turf to replace To merely incise the mucous membrane over the trigone in such a case and shell out the prostate as a whole, leaves a ragged orifice to the bladder This contracts and ultimately forms a strictured vesical orifice

The most striking example I can give is the following

An old gentleman had the prostate removed suprapubically in the usual way by a surgeon of acknowledged worth and repute Three months later the suprapubic wound closed and the patient at once found himself unable to micturate, nor could his physician pass a catheter further than the membranous urethra.

After prolonged retention and fever the suprapubic wound opened I was then asked to see him and on opening up the bladder I could not discover any urethral orifice at all, either with a powerful headlight or with the finger Its position seemed to be taken by a dense knob of cicatricial tissue at the apex of the trigone, nor could I pass an instrument beyond the bulbous urethra

Under these difficulties I obtained several sheeps' urethras, gradually dilated the stricture at the membranous urethra, ploughed a new passage toward the base of the bladder, pressed the steel bougie against the trigone and cut through the dense cicatrix until I had made a free, fresh vesical orifice. I then lined this new passage and orifice with strips of the sheep's urethra and so far the result has been sucessful in affording the patient fair urination and passage to a sound

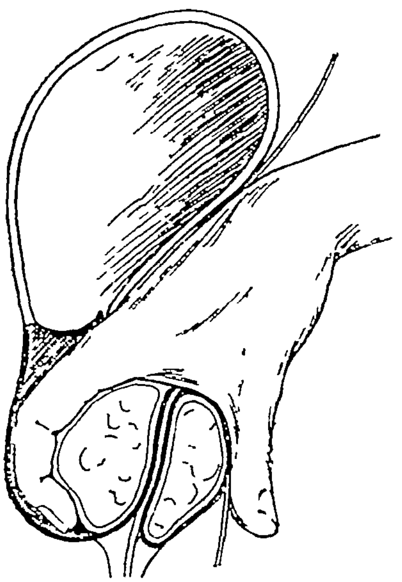
Fig 4—Finger pushed still further

I may digress to say that I obtained the idea of a sheep's urethral graft from my brother, Clennell Fenwick, of Wanganui, N Z, in 1896, also that five years ago I successfully inserted a goat's urethra into a big perineal gap of a boy's urethra The wound healed by first intention and the patient is well to-day, so that the idea is practical A bullock's urethra, however, will be found more easy to manipulate

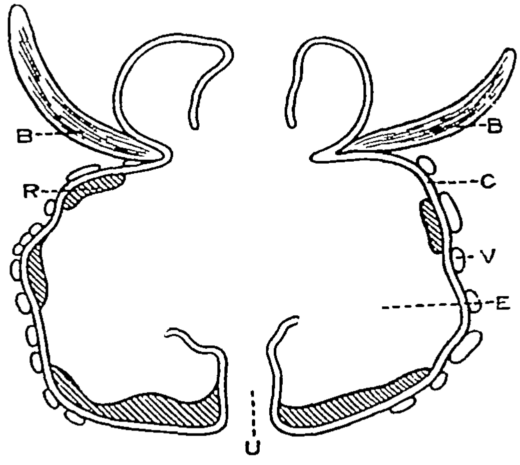

Fig 5—Prostatic capsule emptied of its contents with torn ends of prostatic urethra above and below B, Bladder base.

I suggest that if a median or a large projecting lateral lobe be present that it be separately enucleated by an antero-posterior incision, and that the remainder of the prostate be removed by a method which I have always used,[1] which consists in starting the separation from the prostatic urethra Thus The forefinger is inserted into the prostatic urethra up to the first joint (Fig 1), the point of the finger is then bent and plunged sideways through the mucous membrane (Fig 2), which in the soft elastic prostates gives readily before the pressure At once the finger finds itself between the tough capsule of the prostate and the contained adenomatous masses (Fig 3), traveling on without much opposition, the entire lobe is enucleated (Fig 4), and generally stripped off the urethra Especial care is taken with the floor of the urethra and with the opening of the ejaculatory ducts to leave the former intact and attached to its bed Usually the adhesions between the lateral walls of the urethra and the lateral lobe are very dense, that part of the canal comes away with the lobe, but the floor is preserved The lobe is now very gently detached from the triangular ligament, so as not to tear or bruise the membranous urethra, and, the lobe being free, it is pushed or pulled into the bladder, the opposite lobe is removed in a similar way The finger finally smooths down the mucous membrane in the prostatic urethra, leaving the vesical ring quite clear and free from any projecting tags (Fig 5) It heals (Fig 6) by the structure being lined with part of the original prostatic urethra

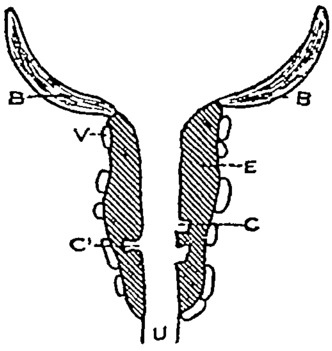

Fig 6—The same healed Ends lining shrunken prostatic capsule and fusing at CC'

I invariably work in very thick rubber gloves and never employ any instrument after incising the bladder, except in old-standing hemorrhage from prostatic ulcers These ulcers I cut out with a knife under the control of the head lamp and caisson before I start enucleation

The second and third vital points hinge on the technic I have just described

2 The destruction of the ejaculatory ducts Very many patients immediately and absolutely refuse the suprapubic operation because they can not be promised that they will retain sexual power I am convinced of the enormous tonic value of the male sexual function in maintaining arterial health and even longevity, and I contend that ruthless destruction of the secretion of these glands will not only bring the operation into disrepute, but that it will greatly minimize the excellent future results obtainable by the procedure

3 I think members of the profession little realize how readily the membranous urethra is damaged by the separation of the anterior face of the prostate from the face of the triangular ligament It is astonishing how easily the mucous membrane is bruised and its muscle lacerated As this is the future reinforcing sphincter of the bladder after prostatic enucleation, it should be very gently and cautiously handled

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[1] This is a method of which I published a description in 1904

To Reduce Obesity—Von Basch advises graduated exercises and walking short of exhaustion restriction of carbohydrates and liquors, mineral waters containing Glauber's salts, and carbonated brine and vapor baths—*Denver Medical Times*

INDICATIONS FOR PROSTATECTOMY AND THE RESULTS OF THE OPERATION *

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The indications for removal of the prostate are based on the pathologic conditions present in the gland as manifested by symptoms and signs relative to obstruction to urination The endeavor should be to learn the cause of the obstruction to the urinary outflow by studying the clinical evidence presented in each case Inasmuch as an accurate opinion of the pathologic changes in the prostate cannot be formed without an antemortem or a postmortem section, we are forced to divide the indications for prostatectomy into two great classes First, clinical, second, pathologic

CLINICAL INDICATIONS

The clinical features of the disease may develop slowly or quickly, run an intermittent or a continuous, but usually a chronic course, with or without complications, until complete retention of urine occurs The function of the bladder is interfered with first It begins to empty itself more frequently, both day and night, and the act of urination becomes difficult and prolonged The stream starts slowly, flows less forcibly, sometimes intermits, and ceases in an involuntary dribble The more the patient hurries to complete the act, the more time it requires to perform it. The frequent and difficult urination is followed by a general vesical distress, which eventually becomes quite painful, and when cystitis ensues, an additional train of symptoms is added to make up what is designated "prostatism" *These symptoms are present* in nearly every case of prostatic obstruction Frequent and painful urination may be the most prominent symptom in chronic nephritis, but the difficulty of urination and the dribbling of urine are absent It is probably too dogmatic to say that "nocturnal frequent urination is almost pathognomonic of hypertrophy of the prostate" In order that the clinical indications for prostatectomy may be of any practical value, some classification of the cases is desirable I select the following

I *Cases Manifesting Genitourinary Functional Disturbances*—Cases with functional disturbances may last for months or years, and still not give sufficient cause to remove the offending organ Besides frequent difficult, and prolonged urination, other symptoms, such as sexual irritability, too frequent erections, premature orgasms, and unsatisfactory coitus may appear early, much to the discomfort and annoyance of the patient A feeling of fulness in the bladder and perineum is present during the daytime and on awakening after the first sleep at night there is pain With all his hurried calls to urinate, and slow and imperfect accomplishments, the man of 50 or 60 years, of continued health and prowess, conceited in his powers of enduring resisting and conquering things generally does not consult a surgeon until his better judgment sorely tried, comes to the rescue not until he finds that prescribed, recommended or suggested bladder and kidney medicines, rest at home and at hot springs, and restricted diet are of but little avail And furthermore, that exposure local and general excitement, and alcoholic stimulants increase his difficulties

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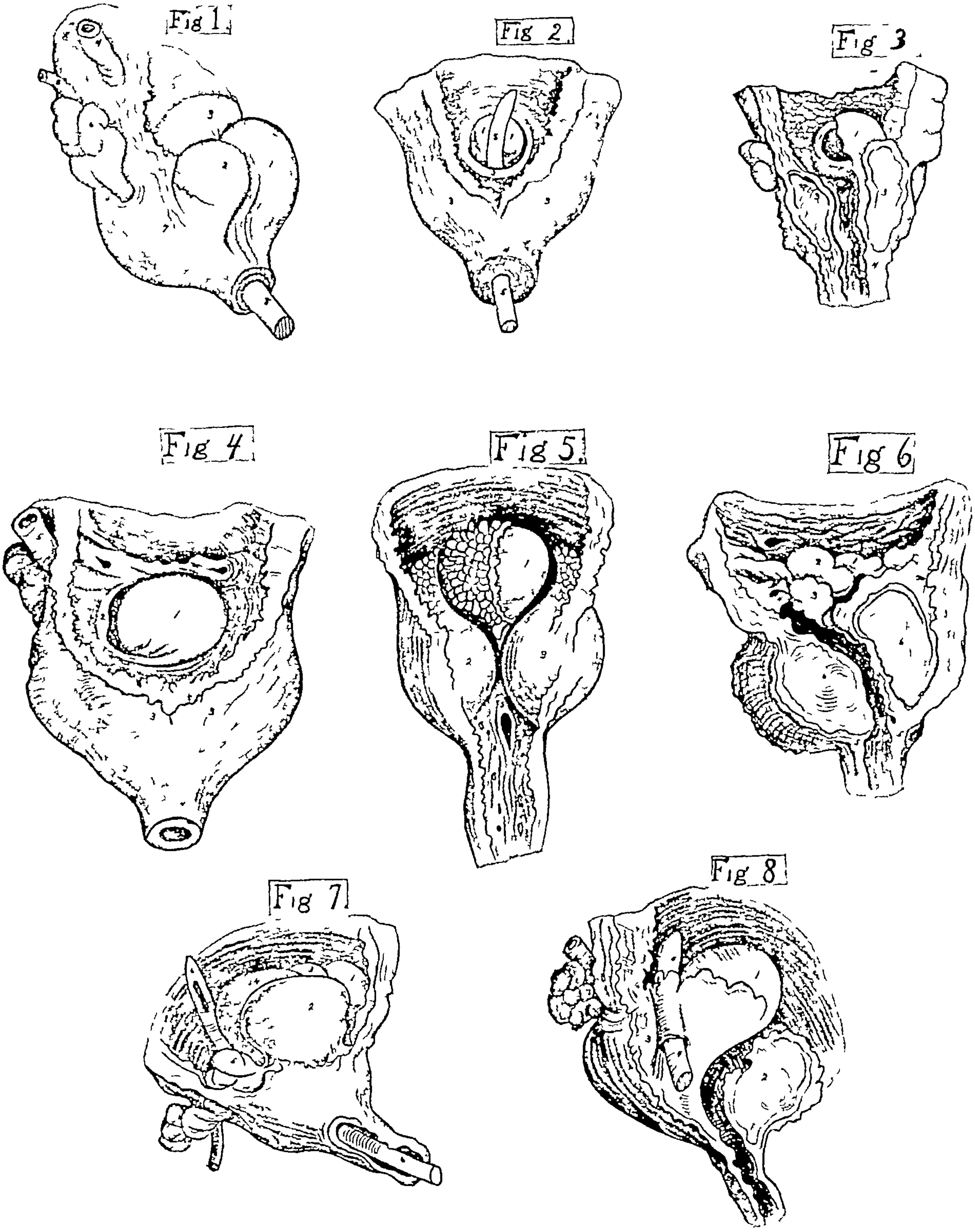
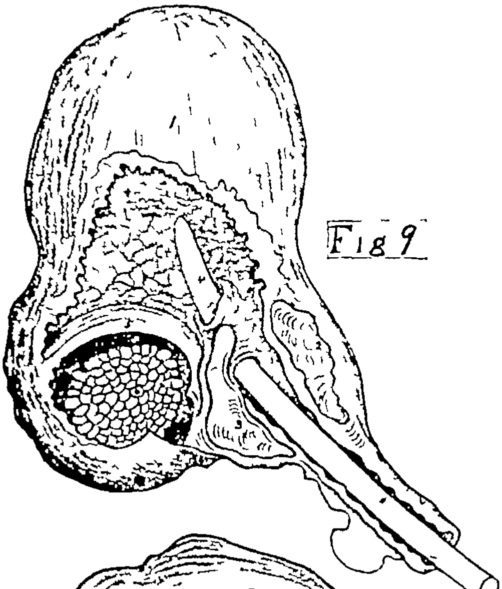
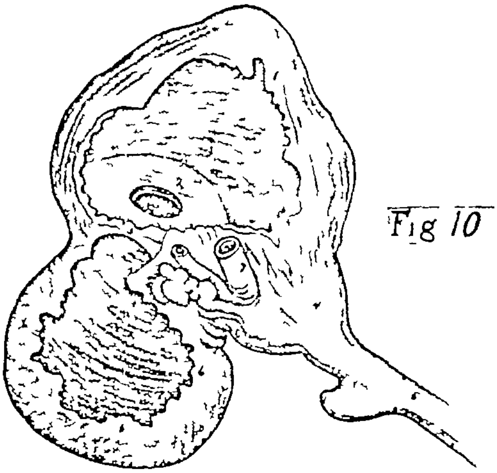
* Read in the Section on Surgery and Anatomy of Medical Association at the Fifty-seventh Annual Ses

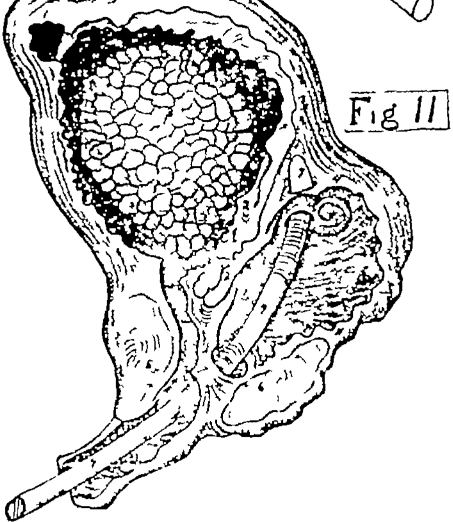


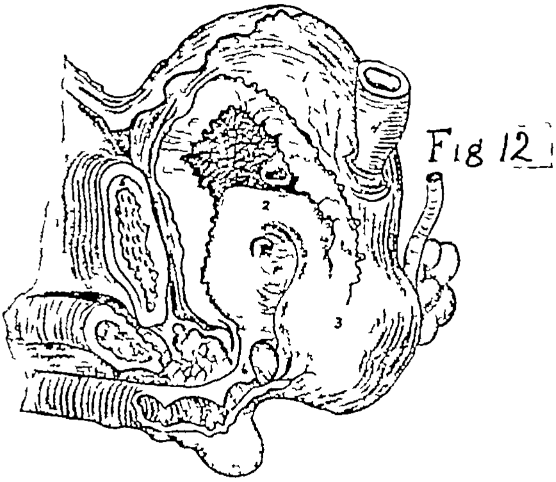
PATHOLOGIC DEFORMITIES OF THE PROSTATE.

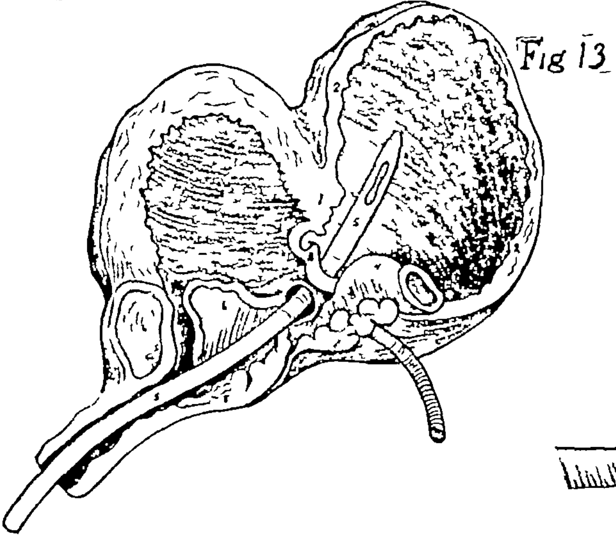
Fig 1—Lobes 1 2 and 3 are equally enlarged and protrude into the bladder
Fig 2.—Crescentic meatus, 1 middle lobe, 2 ring 5, bougie
Fig 3—1 Cyst.
Fig 4—1 Lateral lobe.
Fig 5—1. Central lobe 2 and 3 lateral lobe, 4 calcareous deposit.
Fig. 6.—1 2 and 3 middle lobes, 6 lateral lobe.
Fig 7—1 2, 3 and 4 from lateral lobe 5, central lobe.
Fig 8—1, Central lobe 2, lateral lobe.

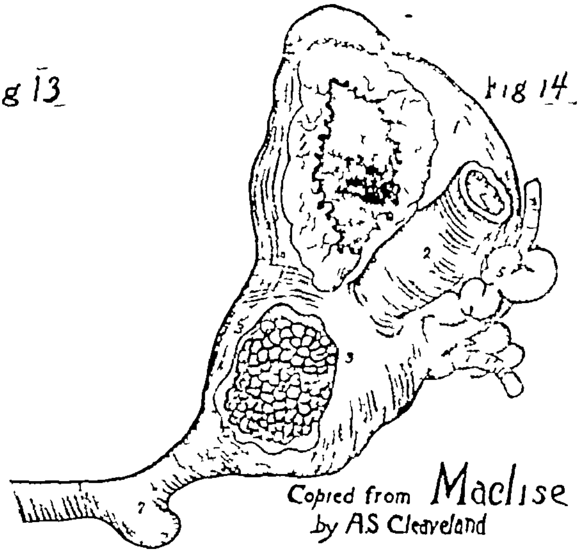












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PATHOLOGIC DEFORMITIES OF THE PROSTATE.

Fig 9—Bladder thickened 5 sac 6 stone in sac.
Fig 11—Stone in the bladder 7 sac empties into urethra.
Fig 13—1 Bladder 2 sac 4 ureter 5 bougie 7 vesical orifice.
Fig 10—2 Opening between bladder and sac 6 sac.
Fig 12—1 Bladder 2 and 3 prostate gland 4 ureter
Fig 14—1 Bladder 2 dilated ureter 4 two calculi in prostatic urethra 5 vas deferens.

In such a case no residual urine is found by the catheter, and no positive enlargement of the prostate can be detected by a rectal or bimanual examination, aided by a sound in the bladder, but the bladder is intolerant to the sound and the prostate is tender to manipulations. The urine is normal. The cystoscope may reveal a congestion of the internal vesical meatus and of the surrounding bladder mucosa, with some prominence in the latter. The diagnosis of a congestion of the prostate is now made. This is the first stage of prostatic hypertrophy. So long as there is no marked obstruction to the flow of urine, even though the gland is felt *per rectum*, to be prominent, prostatectomy is not yet indicated. In the absence of other causes of congestion, the fact that urination is prolonged is rather conclusive that the prostate is slightly hypertrophied. In this class of cases the genitourinary specialist finds a field for great usefulness, and by proper hygienic and local treatment prostatectomy may, in some individuals, be controverted.

The percentage of cases that remains rebellious to treatment and becomes worse must be high. It is self-evident that these patients should be operated on early before residual urine forms or infection occurs. It is unfortunate that many physicians do not associate early functional annoyances of the genitourinary organs, in men past middle life, with prostatic hypertrophy, for patients suffering from these symptoms either go on suffering or drift into the hands of public sinners in the profession, the advertising specialists. Finally, as a last resort, they come under the care of a competent surgeon at a time when they are defunctioned and on the verge of eternity through complications that at one time would have been avoidable, and through advanced pathology that should have been forestalled.

II. Cases with Partial Retention.—A man whose *bas fond* has formed so insidiously as not to interfere with his daily work or rest at night, other than a slight interference with urination, is likely to have acute retention of urine on exposure to cold, or as an after-dinner surprise. Relief is obtained spontaneously by antispasmodics, or by the use of a catheter, but almost ever afterward the catheter draws off residual urine after micturition. To avoid a return of his acute suffering from retention, he has to obey promptly Nature's call to empty the bladder, and avoid wine, exposure to cold and wet, as well as over-indulgence of any kind. A sagging of the bladder behind the prostate to hold residual urine, forms slowly, the process usually being manifested by an exaggeration of the symptoms and the signs already pointed out as characteristic of cases of the first class. There are two forms of partial retention, acute and chronic.

Acute. On determining the existence of prostatic dysuria and partial retention in any case, the dangers following permanent catheterization should be explained clearly to the patient. The habitual or daily use of the catheter must be denounced, whether in the hands of the nurse, patient, or physician. Even when the comparative comfort of the patient requires catheterization, cystitis is almost sure to develop in spite of all precautions. I impress on the patient the nature of his malady, explain that it is only a temporary relief that is afforded by the catheter, point out its dangers to life, and also the great results obtained by prostatectomy. Harrison, Lydston and others have shown that the expectation of life while using the catheter is only about four or five years.

Repeated hemorrhages into the bladder of a prostatic patient are sometimes profuse and dangerous. Instead of this sign being a contraindication for prostatectomy, as some operators aver, I have found that the sooner the gland is removed and the bleeding is checked, the safer it is for the patient. In this connection it must be remembered that erosions and ulcers due to catheter traumatisms are not prone to heal when the mucous membrane is chronically congested, as it is in all these cases. When the bladder becomes inflamed, whether the catheter has been used or not, the patient should be ordered to bed, preferably in a hospital, starved, purged and his bladder systematically irrigated for a week or more until the acute symptoms have subsided. Then the prostate should be removed before he resumes his work.

The cases that are difficult to treat successfully are those that are complicated with chronic cystitis. It is admitted by authorities on this subject that if the bladder is once chronically inflamed, it remains inflamed until the prostatic obstruction is removed. The sufferer should know the permanent damage that is sure to be done to the bladder, such as contraction, trabeculation, and formation of diverticula and stone. He should also be informed that ultimately ascending infection to his kidneys will prove fatal.

Chronic. In the chronic form of partial retention the quantity of residual urine gradually increases until eventually the bladder becomes distended to its utmost capacity, when some relief is often obtained by the urine forcing open the vesical meatus, causing an overflow in little intermittent streams or drop by drop.

Cases of the second class develop into cases of the third class in the manner just described.

III. Cases with Complete Retention.—In complete chronic retention the bladder is full all the time, every five, ten, or fifteen minutes during the day, involuntary urination occurs, while at night almost a constant dribble is noticed. Atony or contraction of the bladder is more or less extreme, depending on the length of time the retention has been complete, or on the duration of the cystitis.

The passing of a sound through the penis and the insertion of the finger into the rectum may reveal prostatic obstruction in the urethra on the one hand, and hypertrophy of the prostate on the other. Shall we recommend prostatectomy for members of this class? Yes. If, however, advanced age, feebleness, or disease of the kidneys or heart forbid an anesthetic, the operation is contraindicated, but neither the age of the patient nor the prostatic enlargement *per se* is a bar to prostatectomy. If the person is able to survive the operation, experience has taught that the kidneys will be benefited, the atony will subside wonderfully, and the bladder, oftener than not, will be able to contract and empty itself of its contents. Acute and partial retention usually repeats itself many times and then becomes chronic, and chronic retention may at any time become acute and complete.

IV. Cases of Absolute Incontinence and No Residual Urine.—In all cases of marked prostatic enlargement causing urinary disturbances, except in those of this class, there is residual urine, the prostatic urethra is elongated, enlarged, often tortuous, and its curve is increased. These conditions are detected by the catheter, the sound, and the cystoscope. In this class, however, there is not frequent urination, no dysuria, no residual urine, no elongation of the prostatic urethra, and no fulness or pain in the bladder or perineum.

On passing a catheter the bladder is found empty The patient probably has been treated for months or years for paralysis It is in this class of cases that the prostatic enlargement is in front and protrudes into the bladder anterior to the vesical orifice (Fig 18) Since the sphincter cannot close the vesicle meatus, the urine no sooner enters the bladder than it flows away If there be an overhanging enucleated development of prostatic tissue, as is here also represented, the vesical meatus may become blocked by it and retention follows The enlargement may be felt above and behind the symphysis pubis Cystoscopy may show the site, shape, and probable size of the prostatic hypertrophy In this class of cases there is no posterior, pathologic middle lobe, no bar, and no vesical meatal pouting or stricture Prostatectomy offers the only relief I have encountered two of these pathologic conditions and removed the prostates successfully The bladder regained perfect control of the urine in both cases

Prostatectomy is not always called for on account of the large size of the gland, for it may be very large and still offer no obstruction to micturition Obstruction is the *sine qua non* for the operation In one case of acute prostatitis,[1] I found the rectum partially obstructed by the great size of the lateral lobes, and still the man had control of his urine and emptied his bladder completely There was no abscess in the gland

PATHOLOGIC INDICATIONS

The prostatic urethra may be obstructed in any part of its course by hypertrophy of the prostate gland so as to prevent the free exit of urine from the bladder When this takes place to the extent of disabling and endangering a man's life, there is a pathologic indication for prostatectomy

I Removal of the hypertrophied prostate is recommended because it interferes with the function of the vesical meatus while at rest and during activity How? In many ways

1 The hypertrophy raises the vesical meatus above the level of the base of the bladder like a nipple (Fig 17), or like a cervix uteri, so high that the bladder can not empty itself

2 The vesical meatus is held open by the hypertrophied gland, causing constant leakage of urine (Fig 18)

3 Congestion or inflammation of the mucous membrane causes obstruction and retention

4 The vesical meatus may be flattened from one side or both, and from in front or from behind, or both forming a straight or crescentic slit, or according to the direction and manner of prostatic pressure, the meatal opening may be left small, oval, star-shaped, Y-shaped or even spiral (Figs 1 to 18)

5 A pedunculated growth arising in front of, but oftener from behind the urethra, may obstruct the meatus by a ball-valve-action, giving rise to a sudden stoppage of the flow of the urine while the man is micturating, simulating stone in the bladder At other times the polypus-like growth causes complete retention (Figs 2, 18, and 19)

6 A bar of tissue and mucous membrane occasionally becomes stretched across the vesical meatus between two enlargements of the lateral lobes and offers obstruction to the urinary flow (Fig 20) These conditions interfering with the neck of the bladder functionally and anatomically have no tendency to clear away spontaneously, and in order to prevent further distress and pathologic changes the removal of the prostate is indicated both for comfort and to save life It is not often that a bar alone exists

II The second pathologic indication for prostatectomy is when the hypertrophy obstructs the flow of urine from the bladder, in any part of the prostatic urethra, from the vesical meatus to the membranous urethra

1 The entire enlarged gland may surround the prostatic urethra and obstruct the flow of urine through it by circumferential pressure

2 Both lateral lobes may compress the urethra in one or more places

3 One lateral lobe or a nodule in it not infrequently obstructs the urethra The size of the prostatic growth, and the degree of obstruction, bear no exact relationship to each other, for a small nodule may more thoroughly obstruct the urethra than a large one

III A third indication is found in a condition of contraction and cicatrization of the prostate from chronic inflammation In the case of one patient operated on by me, the prostatic infection was first a mixed one, then mostly streptococcic, and, finally only the colon bacillus was found While chronic inflammation is occasionally a pathologic indication for prostatectomy it does not belong to the senile prostatic class

IV The fourth pathologic indication for prostatectomy is the deleterious effect prostatic obstruction has on the bladder, kidneys, and rectum

For the purpose of demonstrating the gross pathologic conditions found in the cadaver in cases of senile prostatic hypertrophy, fifty years ago, Mr Maclise,[2] F R C S, London, published a book in which one chapter is devoted to this subject He states that he made the drawings himself from prostates and bladders examined in the hospitals and museums of London Paris, and elsewhere They are the best I have seen Some of his drawings are reproduced in Figures 1 to 14, which need no description other than the labels attached thereto The term "middle lobe" is used to indicate a lobulated mass of hypertrophied prostatic tissue situated in the middle at the neck of the bladder

LITERATURE BEARING ON COMPLICATIONS, [illegible] AND MORTALITY

Hugh H Young reports 50 cases of perineal prostatectomy without any deaths The ages of the patients ranged between [illegible]0 plus and 50 plus, two being over [illegible] years old, and thirteen being between 50 and 60 One man, aged 72, was in excellent condition two years after the operation when, after an enema, he died suddenly. The autopsy showed pulmonary embolism A second death occurred one month after the operation in a patient aged 82 He did well for two weeks after the operation, but then gradually grew weaker and died apparently as much from old age as anything else Of the 50 patients 22 claimed to have normal sexual powers, 10 patients reported the sexual powers impaired before the operation There were 3 cases of rectal fistula and 1 case of slight incontinence of urine Epididymitis occurred in two weeks in 2 cases, in three weeks in 3 cases and after two months in 1 case The epididymis was involved on one side only The bladder was infected in every case

George [illegible] Whiteside[4] reports [illegible] of 232 cases, collected from many sources He says that perineal prostatectomy is considered by the majority of surgeons as the best operation in most cases Immediate death results from sepsis, shock, cardiac disease, pneumonia, and uremia. Remote death occurs from cancer, cachexia, pyelonephritis, embolism, and may be the result of secondary operations done to overcome defects left by the first Absolutely good results occur in about 30 per cent of all patients operated on Sequelæ are numerous and troublesome They include rectal fistula, urinary sinus abscess, stricture at the bladder neck, incontinence, frequent micturition, residual urine, epididymitis, sexual impotence, cystitis, vesical calculus, and urinary tuberculosis Carcinoma, sarcoma, and syphilis have all proved stumbling blocks for the diagnostician

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[1] Occurring in the practice of Dr A R Elliott of Chicago

[2] Surgical Anatomy, 185[illegible]

[3] Jour. A. M. A., [illegible]

[4] Am. Jour. [illegible] 190[illegible]

J L Thomas[5] reports 15 prostatectomies, 13 suprapubic and 2 perineal, with 2 deaths, one the result of the operation, occurring 48 hours afterward, and the other due to pneumonia, occurring about 9 days after operation The ages of his patients ranged from 56 to 77 The two who died were operated on by the suprapubic method No complications or sequelæ are reported

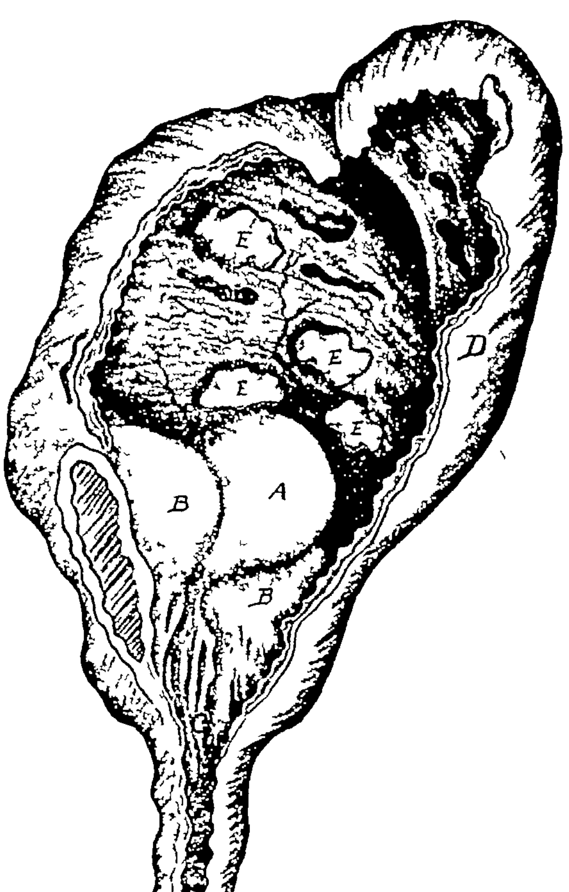

Fig 15—Three lobes enlarged obstructing the vesical orifice bladder sacculated contracted and containing calculi A median lobe B lateral lobes C prostatic urethra D bladder F calculi embedded in pouches

J E Moore[6] in a critical article on the subject of prostatectomy, points out its inconveniences and dangers He thinks it is too grave an operation to be resorted to as a routine treatment, and that it is applicable only in properly selected cases The ever-present danger of uremia in kidney disease or sepsis, the various complications such as injury to important blood vessels, peritoneum and nerves, hemorrhage, which however, is not a very serious danger, the possibility of permanent damage to the urethra and of extensive injury to the bladder in case of the suprapubic operation, and in the perineal operation of injury to the rectum, must all be taken into consideration Moreover, under the present technic the seminal ducts are not preserved, and this is a grave complication Other unfortunate sequelæ are epididymitis, incontinence or dribbling of urine, and the possibility of perineal fistula He says that it is a mistake to fill the large space in the perineum with gauze because it delays union and leads to complications

J W Thompson Walker[7] refers to 73 cases operated on by Freyer up to December, 1903, many of which were complicated by cystitis, either chronic or in recurrent attacks Four patients who had stone died In the case of two of these the stone had been removed some time previous to the operation on the prostate, and in the remaining two the stone was removed at the time of the prostatectomy In none of these cases could the fatal result be attributed directly to the condition of the bladder In three of the fatal cases renal disease was noted or suspected One patient died of uremia, and a dilated renal pelvis and ureters were found In the case of another patient, whose death was ascribed to bronchitis, a few granular casts and albumin had been found in the urine Three patients died of pneumonia, and it was noted that there was probably advanced renal disease In none of the fatal cases was death ascribed to failure of the circulation One patient whose death was charged to uremia was very stout and suffered from emphysema and bronchitis One patient died of bronchitis

The same author[8] also reports a series of 111 cases, with 20 deaths, 13 of which occurred in patients who were obviously at the point of death when operated on The long-standing cystitis disappeared or was greatly lessened in more than half the cases, and distinct amelioration of the most troublesome symptoms occurred in over 80 per cent of the cases, with a return to conditions not very far removed from normal in 46 per cent of those operated on

P J Freyer[5] reports 60 cases of total enucleation of the prostate, with 5 deaths, one from chronic disease of the liver, probably malignant, two from uremia, one from bronchitis, and one from unknown cause The fatal cases were in patients aged 59, 67, 73, 70, and 69, respectively

Alexander B Johnson,[9] New York, reports 4 cases operated on by the perineal route, and consequent abdominal incision having been used to afford access to the prevesical space There was neither cystitis nor residual urine in two cases three years and two years after operation, respectively The urine of the third case after one and a half years, contained a faint mucous cloud, with slight residual urine In the fourth case, five months after operation, urination was said to be normal in frequency, with a clear urine

Archibald MacLaren[10] reports 13 prostatectomies, with only one death The patient was suffering from a suppuration of both testicles and an acute cystitis Postmortem showed a double pyelonephritis One man died nine months after the operation from cancer of the pelvis He had full control of his urine till his death One man had total incontinence In his case the prostatic urethra was removed with a hard inflamed prostate He is now wearing a urinal and his condition is better than it was before the operation The remaining patients are alive and well, passing urine not oftener than once at night and five times during the day The oldest patient was 82, the youngest 46, the average age was 64 In five of these cases there were stones in the bladder as a result of the prostatic obstruction In three there has been secondary stone formation after the operation, necessitating a secondary removal One of the patients has had considerable incontinence from a urethral fistula

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[5] Brit Med Jour May 20 1905
[6] Annals of Surgery March 1904
[7] Practitioner August 1904
[8] Practitioner July 1905
[9] Med News Aug 1 1903
[10] St Paul Med. Jour August 1904

George M Phillips published a small handbook in November, 1903, giving the experience of 40 American surgeons with prostatectomy Ten of these report 199 perineal prostatectomies, with 21 deaths, and the following after-results or complications, 9, recto-urethral fistula, 9, secondary hemorrhages, 2, urethral fistula, 6, dribbling of urine, 7, stricture, 1, calculus, 1, epididymitis, 5

H H Martin[11] reports ten cases operated on by the perineal method of Bryson, with two deaths, one due to septic absorption, chiefly from the suprapubic wound six days after the operation, and the other ten days after the operation from an acute nephritis One case was complicated by vesical calculus One case demonstrated the difficulty which may be encountered in enucleating the prostate when a Bottini operation has been done previously Most of the cases were desperate, the cases ranging in age from 62 to 74 Two patients were obliged to use the catheter subsequently, on account of residual urine, but both patients had had complete retention before the operation, and now can pass some urine They are not troubled with frequent urination, and are perfectly comfortable The remaining five patients were relieved entirely, and do not require the further use of the catheter

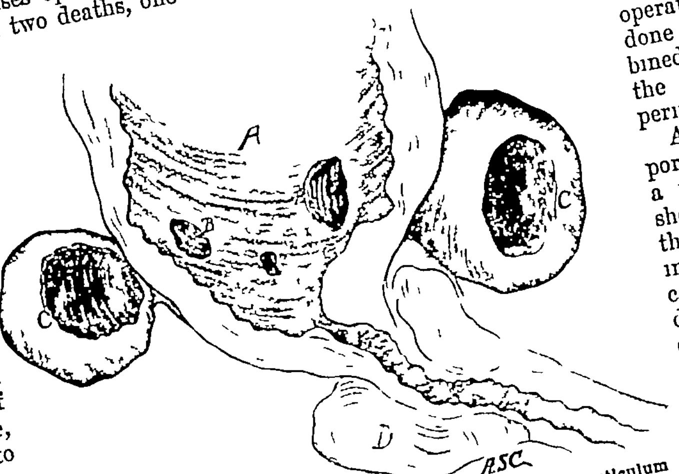

Fig 10—A bladder B mouth of diverticulum, C diverticulum cut open D site of prostate (removed)

F S Watson[12] says that following the Bottini operation 30 4 per cent of the patients are cured, and in 84 4 per cent good results are obtained Following perineal operations 60 per cent are cured, and in 88 per cent good results are obtained Following suprapubic operations 66 per cent are cured, and in 90 per cent good results are obtained In a series of 267 Bottini operations there were 11 per cent of failures, and incontinence of urine resulted in seven cases, or 2 6 per cent In 59 other cases operated on by the Bottini method and reported by Willy Meyer, epididymitis occurred in six and orchitis occurred in two cases In one each of these cases suppuration ensued, and in another case there was gangrene of the testicle Perineal abscess and urinary infiltration occurred in four cases owing to the membranous urethra having been injured In another case the rectum was injured and a recto-urethral fistula resulted Altogether, there were more or less serious complications in 22 per cent of the cases In 245 cases of perineal operation, there were two in which the peritoneum was opened, seven in which recto-urethral fistula resulted, and nine in which incontinence followed, 7 3 per cent of accidents A small proportion of incontinence and persistent fistula ensued following the suprapubic operation, this altogether amounted to about 6 per cent

Hugh Cabot[12] reports 53 operations performed at the Massachusetts General Hospital from January, 1892, to July, 1893 The average age of the patients was 63 years, with 9 deaths a mortality of 17 per cent Eight Bottini operations, average age 61 years, no deaths Thirty-four cases of castration, average age 66 7 years, five deaths, 14 7 per cent mortality Of 25 patients since heard from, operated on by the cutting method, eleven are well, six are relieved, and eight are the same or worse Of the perineal operations, 57 per cent of the patients were well or relieved, and 43 per cent were worse Of the complete operation, 83 per cent. of the patients were well or relieved, and 17 per cent were worse The complete operations were largely done either by the combined method or by one of the modifications of the perineal method

Arthur L Chute[13] reports a case occurring in a man, 72 years of age, showing the condition of the bladder and surrounding structures in a fatal case, death taking place 23 days after a suprapubic enucleation

Escat[14] presented the results of 410 cases of perineal prostatectomy, death followed in 47 cases, 1 3 per cent, a urethro-perineal fistula or rectal fistula in 8 per cent, and permanent incontinence of urine in 3 per cent He favors perineal prostatectomy because the mortality of the suprapubic operation is higher, 10 to 15 per cent He also considers the partial removal more dangerous than the complete removal Proust[14] collected 813 cases of perineal prostatectomy, with a mortality of 7 13 per cent Albarran[14] lost two cases out of 66 (3 per cent) operated on by the perineal method Of 34 cases of chronic complete retention before operation followed for a year thereafter 32 were completely successful in two cases there was residual urine amounting to a few ounces which he thinks was due to the existence of a sclerosis of the vesical walls consecutive to a chronic cystitis Of 23 operations for incomplete retention there were 12 complete successes and three failures These latter are chronic cases of hypertrophic prostatis He says that the results of complete transvesical prostatectomy are remarkable in almost all the published cases the patients urinate easily and completely, being able to empty the bladder spontaneously Furthermore, there are no permanent fistulæ, no cicatricial contractions of the vesical neck, no injuries of the rectum, no loss of sexual power The greater mortality, however, constitutes a barrier that must be considered In 12 cases of suprapubic cystotomy for various purposes, in men over 60, he has not had any mortality He ascribed his low mortality to his great care in determining the contraindications to operation Of 44 cases operated on by the perineal method, more than a year before, and 15 cases operated on from three to four and a half years earlier, there were 55 complete successes, 4 partial successes, and 3 complete failures Nicholich[14] performed 12 perineal prostatectomies with two deaths, 12 Freyer's operations with one death

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[11] Med Record Oct 8 1904
[12] Boston Med and Surg Jour April 28 1904
[13] Boston Med and Surg Jour, Aug 3 1905
[14] Ann des Mal des Org G U 1905 p 1074

Freyer[15] reports 195 cases of suprapubic prostatectomy In the first 110 cases his mortality was 10 per cent, in the second 85 cases the mortality was 5 8 per cent Nine of the patients were over 80 years old, and one 79 All recovered, nine are alive, with good urinary control, one died from cancer of the prostate In a paper read before the *British Medical Association*, July, 1904, Freyer related his experience with 110 cases of suprapubic prostatectomy, the patients ranging in age from 53 to 84 years In three cases the enlarged prostate was cancerous, two patients made operative recoveries, the third died three weeks after operation Of the remaining 107 cases, 10 patients died from various causes, 2 from mania after the wounds were practically healed, 1 from pneumonia seven days after operation, 2 from exhaustion a few hours later, and 2 from septic infection Complete success resulted in 97 cases, the patients regaining completely the power of voiding and retaining the urine, without fistulæ or incontinence

Moynihan[16] reports 12 cases of suprapubic prostatectomy with one death Bathing[17] reports 10 cases, and Stoker[17] reports three cases without a fatality Goodfellow[18] reports 73 cases of perineal prostatectomies, with 2 deaths, one after seven hours, the other from sepsis after eleven days There have been no permanent fistulæ In several cases partial incontinence of urine has lasted two to four months in men over 70 years of age

Freyer[19] reports 31 cases of extirpation through a suprapubic cystotomy, with four deaths, 22 recovered from the urinary troubles Albarran[20] reports 42 perineal prostatectomies, with only one death There were 35 complete cures, two distinct improvements, and three patients were not followed Murphy[21] reports 34 cases, with one death Young[22] reports 12 cases without a mortality Goodfellow[23] reports 26 cases with one death MacGowan[24] reports 28 cases with four deaths

Deffis[25] reports 30 cases with only two deaths, the perineal route having been used Syms[26] reports 20 cases operated on by perineal enucleation without a death Fuller[26] lost only one out of 18 perineal prostatectomies Freudenberg[27] reports 318 cases of the Bottini operation collected from the literature, alleging success in 77 75 per cent, failure in 13 75 per cent, and a mortality of 8 5 per cent Horwitz[28] reports on 161 cases of various operations for the relief of prostatic hypertrophy, including 28 of vasectomy, 31 double castration with two deaths, 11 suprapubic prostatectomy with 3 deaths, 7 perineal prostatectomies with 3 deaths, 33 Bottini without mortality

MORTALITY AFTER PROSTATECTOMY

M Tuffier[29] believes that the suprapubic operation is easier and quicker to perform than the perineal When the gland is very small and the abdomen very fat, he selects the perineal route He points out that the mortality is lower by the perineal operation, and quotes from Proust, Watson, Horwitz, Leque, Hartman, Pauchet, Rafin, Young and Albarran, to the effect that there were 2,227 cases, the average mortality being 6 23 per cent, out of the total number of cases operated on by a large number of different operators He says that renal insufficiency is the cause of death in about the same number of cases in both operations (35 per cent perineal and 33 per cent suprapubic) Shock is given as the cause of death in 17 8 per cent. operated on by the perineal method, and 22 per cent in those operated on by the suprapubic method

The general mortality is about 4 per cent in perineal prostatectomy Re-establishment of spontaneous urination and relief of vesical infection are the rule The genital loss is habitual The age of the patient and the lesions are not contraindications The relative integrity of renal activity is necessary Patients with grave organic deficiency, such as diabetes and albuminuria, succumb to pretended shock The two methods have their advantages and disadvantages

Mortality after prostatectomy is the subject of a paper by Drs Tenney and Chase,[30] in which they accept as possibly due to the operation every death reported as occurring within six weeks From their table we find that 2,342 patients were operated on through the perineum, and 667 suprapubically It will be seen that the average mortality by the perineal route is 7 9 plus The average mortality by the suprapubic operation is 13 2 plus, nearly twice the mortality of the operation through the perineum

In my own cases I had no deaths in the first series of 21 Following that I lost three cases, one from renal insufficiency in 48 hours This was considered a very unfavorable case for any operation Another patient died in twelve hours from an overdose of morphin, and a third succumbed on the ninth day, an unfavorable case because of old age and emaciation This makes my mortality between 3 and 4 per cent in 103 cases, and does not include five deaths following prostatectomy three from carcinoma and two from acute tuberculosis

There have been no permanent fistula even in those with pus-furnishing bladders, which were inflamed, trabeculated and with stones, pouched, or diverticulated (Figs 15 and 16) The natural tendency of the perineum is to close spontaneously, but so long as pus emits, a fistula is likely to persist or to recur I had two of these cases Injury to the rectum during operation is more of a blunder than an accident, and secondary rectal fistulæ are caused most frequently by rough treatment from the eighth to the twelfth day, when granulation is profuse This latter has occurred in the case of two of my patients in whom the after-treatment was not carried out by myself Three patients were wearing urinals on account of partial incontinence, which was more acceptable to them and their relatives than death One of these, 70 years of age, accepted the operation only when life became intolerable from pain due to cystitis etc Considerable sloughing at the seat of operation from the skin inward occurred There was one man with impotence following who avers he proved his vigor

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[15] London Lancet, 1905 p 1268
[16] Ann of Surgery January 1904
[17] Brit Med. Jour Jan 30 1904
[18] The Journal A M A July 16 1904
[19] Brit. Med. Jour April 18, 1903
[20] Ann des Mal G U December 1902
[21] Chicago Med. Recorder August 1903
[22] Am Med., 1903 p 813
[23] Before the Cal Acad. of Med April 29 1902
[24] N Y Med. Jour June 27 1903
[25] Ann des Mal G U October 1902.
[26] The Journal A. M. A., Oct 25 1902.
[27] Centrbl f. krankh d. Harn. u Sex. Org 1901 p 571
[28] Phila. Med. Jour June 8 1901
[29] "Treatment de l Hypertrophie de la Prostate Report au XV Congrés International de Medicine 1905
[30] The Journal A M A. May 12, 1906.

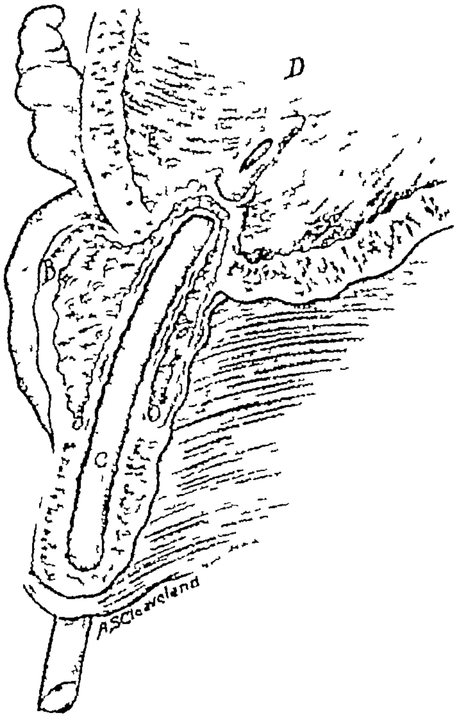

Fig 17 —Prostatic ring, with nipple-like vesical orifice A vesical orifice contracted fibrous like and protruding into the bladder B lateral lobes enlarged but not causing obstruction C bougie in prostatic urethra D bladder E ureters

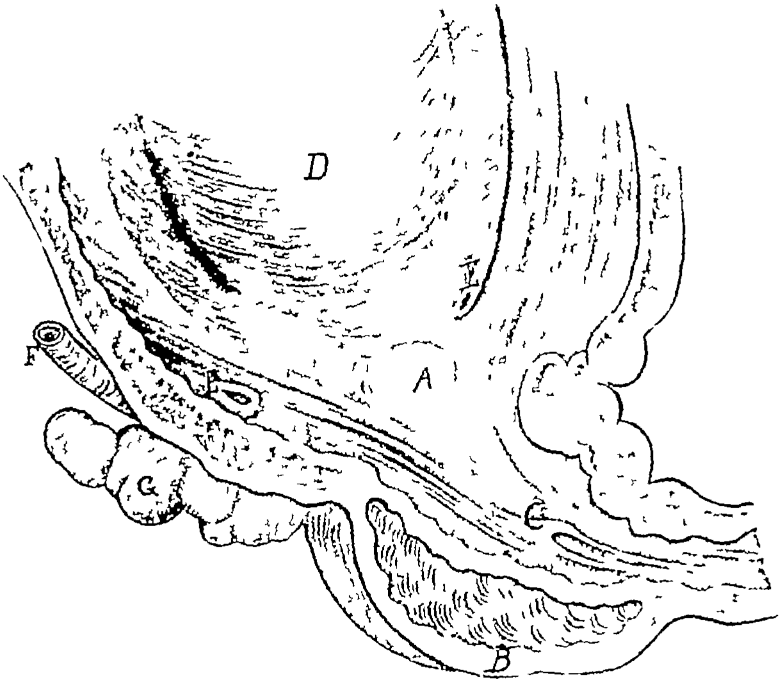

Fig 19 —Central lobe pathologic (tumor like) A central lobe B lateral lobe C, prostatic urethra D bladder E ureters F vas deferens G vesicula seminalis

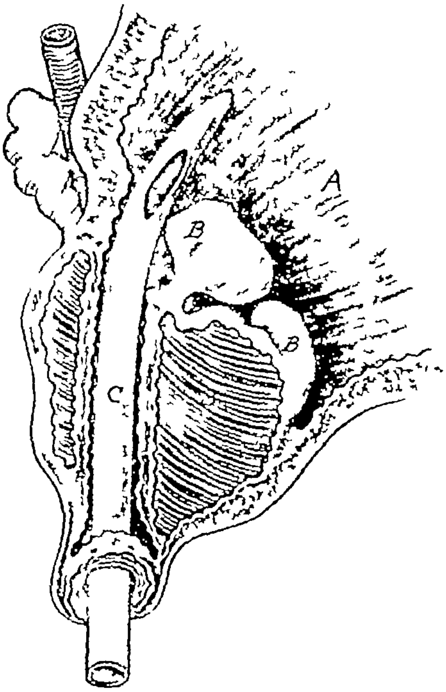

Fig 18 —Hypertrophy of anterior portion of the lateral lobes A bladder B anterior portion of the lateral lobes enlarged projecting into bladder causing obstruction C. bougie in prostatic urethra which is straighter than normal

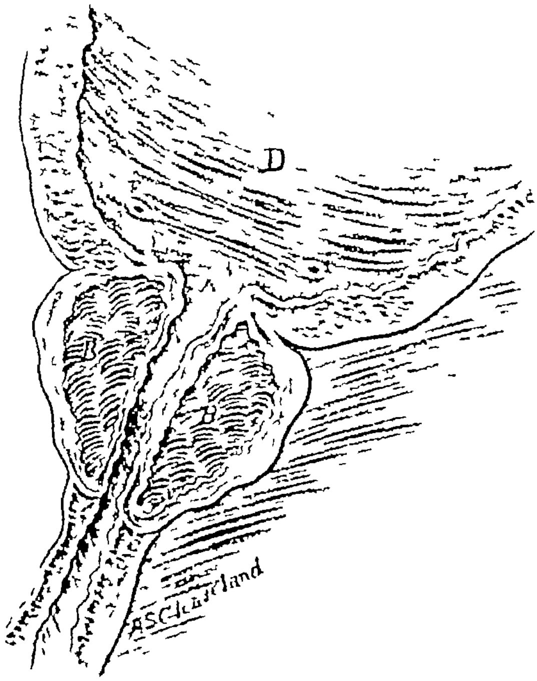

Fig 20 —Lateral section A central lobe forming a transverse bar B lateral lobes C prostatic urethra D bladder E. ureters.

two nights before operation One case of stricture secondary to operation was cured by perineal section Five patients had epididymitis One had unilateral (left) intranephritic and extranephritic abscess developing three weeks after operation I cured him by incision and drainage Stone in the bladder was present in six cases

OPERATION

Before closing, I wish to say a few words regarding the operation through the perineum It is not always necessary to pass a grooved staff through the penis, a sound will do, and I have performed the operation without any guide *per vias naturales* The preferable position in which to hold the patient is that known as the extralithotomy position. While I prefer to open the membranous urethra and proceed down to the sinus pocularis at the point in the prostatic urethra where the ejaculatory ducts open (this sinus, although small in the normal, is not infrequently enlarged in those suffering from prostatic hypertrophy), still I have frequently removed the prostate without any injury whatever to the membranous urethra After splitting the capsule laterally it is best to enucleate the lateral lobes first, carefully dissecting them away from the prostatic urethra without injuring the ejaculatory ducts This procedure is more difficult in some cases than in others, depending on the fibrous attachments between the prostate and its urethra The finger is pressed into the prostatic urethra and acts as a guide while these attachments are cut or taken away piece by piece by biting or cutting forceps So long as the fibrous partition which protects the ejaculatory ducts is not torn through nor injured, these ducts are not destroyed When the ejaculatory ducts are pushed to one or both sides of the prostate and the hypertrophy raises into the bladder like a plateau, then I use the depressor and insert it into the bladder through the perineum to aid the finger in accomplishing the enucleation

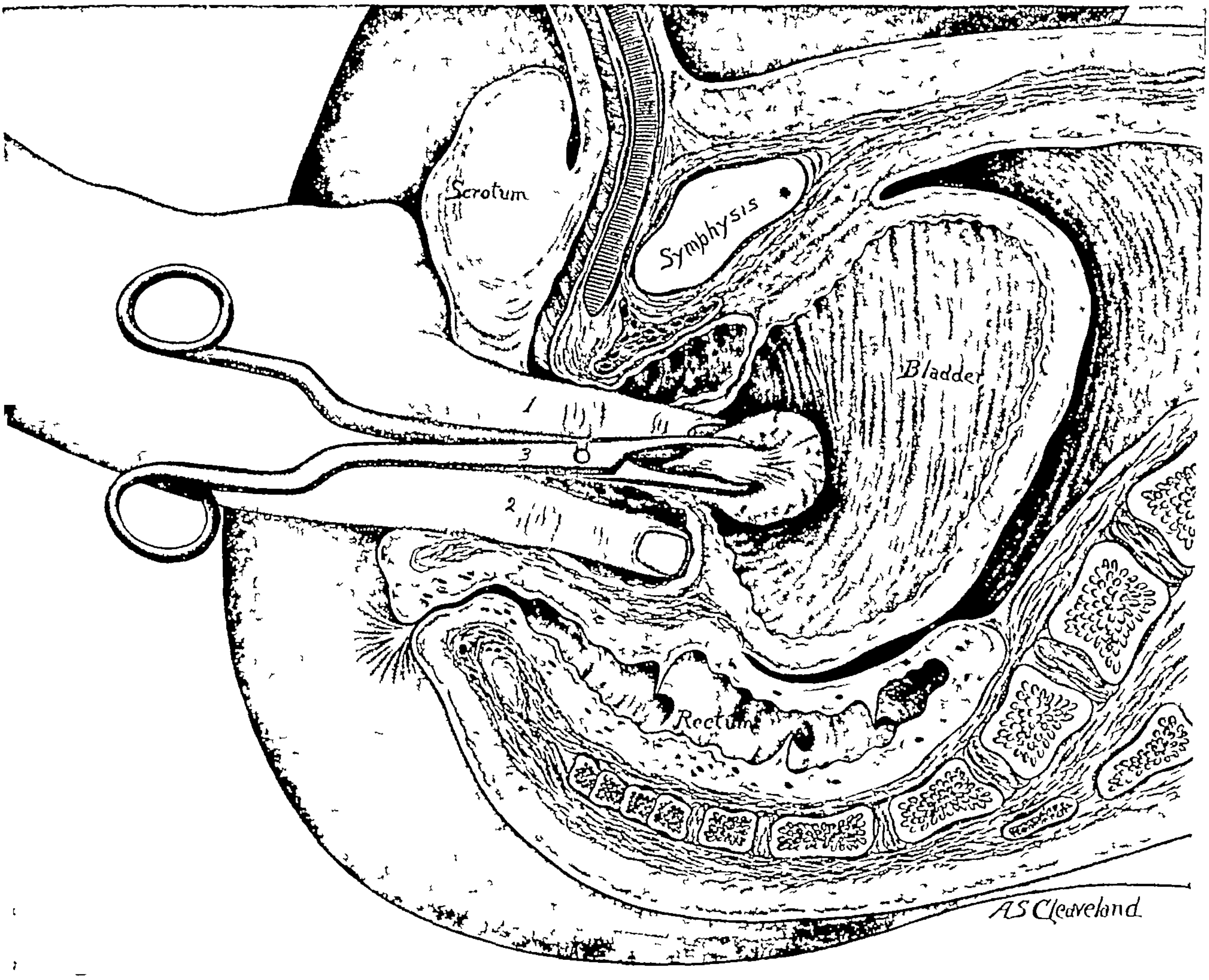

Fig 21 —1 Middle finger in the bladder, 2 index finger in space from which prostate gland was removed 3 prostatic forceps grasping the middle lobe

It may be necessary to follow prostatic nodules in more than one direction behind the bladder, and in their removal care should be taken not to injure the vesical sphincter It is not wise to tear them out forcibly with the finger, but rather remove these nodules piece by piece, with the biting forceps In a certain percentage of cases the so-called pathologic middle lobe (and what else can we call it when it is in the middle) whether projecting into the bladder anteriorly or posteriorly is followed and removed as described above when it has broad attachments to the lateral lobes (Figure 22) On the other hand it is frequently pedunculated and the hypertrophied prostatic tissue is found within the bladder like a polypus The pedicle may be without any prostatic tissue in it whatever, and it would be utterly impossible to follow it by its original route on account of its being shut off by fibrous tissue Then it must be removed by way of the internal vesical orifice The finger is passed into the bladder, the polypoid prostatic tissue is detected and seized by the forceps as represented in Figure 21 In cases in which it is not necessary to preserve the procreative power the ejaculatory ducts are deliberately severed and this expedites and facilitates the performance of the operation

I admit that it is sometimes impossible to save the upper portion of the prostatic urethra, especially when the prostatic enlargement completely encircles it. Still, it is not necessary to remove the entire prostatic urethra as is done by the suprapubic route It is possible to remove the entire gland in one piece without injury to the bladder, ejaculatory ducts, or prostatic urethra in suitable cases Large forceps materially aid in seizing and holding large masses of tissue When the prostate is a bar of tissue at the neck of the bladder, or is a stricture at the internal vesical meatus with or without a protrusion these conditions are usually noticed early in the operation and treated by dilation or removal by the cutting forceps

To refer again to the ejaculatory ducts, if the person treated is young and vigorous and it is very desirable for him to retain his procreative functions, then another expedient may be resorted to which aids as a guide to save the ducts The inguinal region is opened the vas deferens is sought and opened at the internal ring and a fine probe is passed through the vas deferens to the sinus pocularis in the prostatic urethra The best material that I have found for catheterizing the vas deferens and ejaculatory ducts from without inward is very fine aluminum bronze wire 36 in long and doubled on itself The doubled end will readily pass through the seminal duct and can be felt in the prostatic urethra Some of these cases have an oblique inguinal hernia, and this affords an opportunity and also an additional excuse to perform this catheterization in suitable cases

Should it be impossible to catheterize the ejaculatory ducts from without inward then a solution of methylene blue can be forced through into the prostatic urethra which stains the mucous membrane of the ejaculatory ducts and prostatic urethra This however does not act as a guide to prevent their injury but it indicates when they are injured because the stained tissue noticed when it is removed and then [illegible] ed microscope. I make it a practice membrane of the prostatic ureth

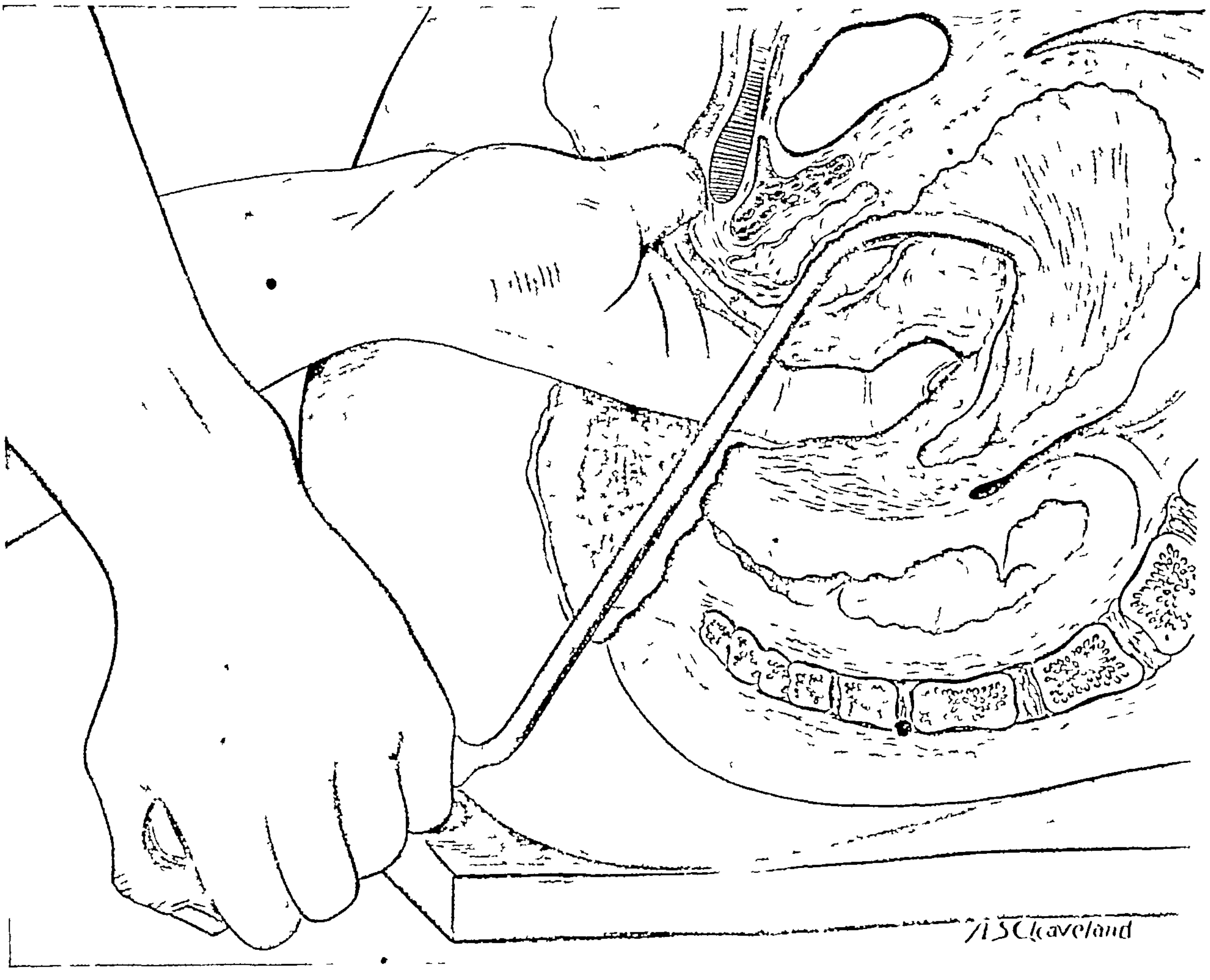

Fig 22 —Extravesical enucleation of the pathologic middle lobe

cases subjected to prostatectomy Care must be exercised to wash the methylene blue out of the bladder before beginning to operate and in its place leave a solution of boric acid sufficient to distend the bladder to its utmost

DRAINAGE

Nearly all my patients were drained through the perineum I am convinced that the technic is improved and convalescence is shortened by drainage through the penis by an ordinary retention catheter, No 23, American The membranous and prostatic portion of the urethra are closed by a few stitches of No 1 chromic catgut, and the deep wound is drained by gauze alone at the most dependent part, and all the structures of the perineum are coapted by an interrupted suture of silkworm gut. The gauze drainage in the perineum is removed on the third day and replaced, in a couple of days this gauze is withdrawn, but the retention catheter is left in the bladder and external urinary tract for a week During this time should temperature develop or vesical tenesmus arise, it is well to wash out the bladder three or four times a day with a mild antiseptic solution I have obtained perfect results by the above technic

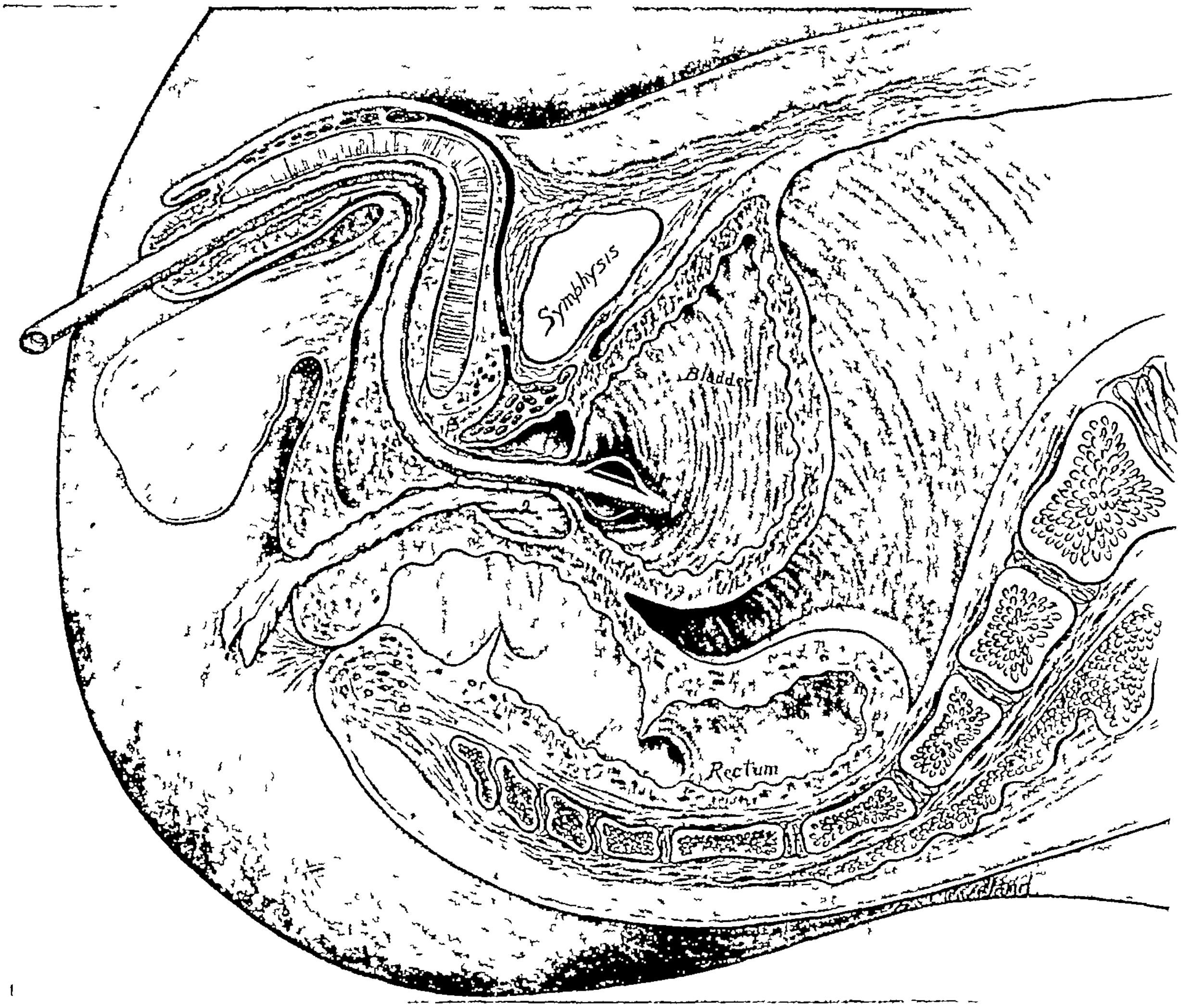

Fig 23 —1 Drainage in place, 2, gauze packing

After the catheter is removed, retention of urine is likely to ensue from spasmodic contraction of the neck of the bladder This is rather a good sign, for it indicates that the sphincter of that viscus has not been injured and the retention is easily rectified by the use of the catheter I have seen men become greatly discouraged and even melancholic after prostatectomy, especially when temporary control of the urine is partly or wholly absent But just as soon as the bladder again performs its function properly, they become bright, cheerful and hopeful After prostatectomy the patient should be kept under supervision for about three months because repair is not complete until about that time Should the patient not be bougied occasionally, at least once a week while repair is going on, stricture at the neck of the bladder or at the junction of the membranous and prostatic urethra is likely to occur I have found it necessary to perform a secondary perineal section in two cases for stricture following prostatectomy, one at the neck of the bladder and the other at the junction of the membranous and prostatic urethra For the latter I blame the perineal drainage alone.

It is remarkable that atony of the bladder subsides completely in the vast majority of cases, but some bladders never become capable of emptying themselves after prostatectomy without considerable delay and difficulty There is also a tendency to cystitis

It must be remembered that patients with prostatic hypertrophy are usually more or less pathologic specimens of humanity in their entirety, and that prostatectomy, although a great boon to them, is not an elixir of life

DISCUSSION

Dr Hugh H Young, Baltimore, did not agree with Dr Ferguson as regards technic, although he said that technic is rather a minor affair, as most surgeons do better work with the methods they are used to employing than with other methods The operation as carried out by numerous English surgeons is outrageous, he said, destroying the urethra, ejaculatory ducts, etc Dr Ferguson's operation has two or three grave defects First, that median incision It does not give as great a field of exposure as is gotten with the inverted V or the curved incision Also by means of a different form of tractor it is possible to do more than that Dr Young thinks that Dr Ferguson is correct in saying that the perineal route is the better of the two, having a lower mortality and a better convalescence

Dr Young is now preparing a report of 150 cases of prostatectomy Among these there were 145 cases of benign prostate Of these, 24 patients were between 60 and 70, 10 between 75 and 79, 4 between 80 and 84, and 1 patient was 87 years of age Among these 150 cases there were seven deaths One patient had a vesical ulcer and a severe stricture and died on the ninth day of vesical hemorrhage The second man was uremic. He was put on prophylactic treatment, but died at the end of fifteen days The autopsy showed a double pyonephrosis The third man was very old He died on the twentieth day of hypostatic congestion of the lung The fourth was a man 72 years of age, delirious, uremic He was put on prophylactic treatment and drained with a catheter It was thought that operation might help him Perineal drainage was instituted and it helped for a while He lived for twenty one days He undoubtedly had a double pyonephrosis The fifth patient was in excellent shape and he ought to have gotten well A day or two before he left the hospital he became constipated He was given an enema and died The autopsy showed a pulmonary thrombosis The sixth patient was 81 years of age He was in very bad shape The bladder was distended up over the umbilicus with 2 000 c c of residual urine He died five weeks after the operation Another man, 87 years of age died of pneumonia contracted twenty four days after the operation In the last year Dr Young had fifty cases with only one death The autopsy showed pyonephrosis Therefore, he offers these cases as showing conclusively that perineal prostatectomy is practically a benign operation, and any patient in anything like fair shape ought to get well, except that pulmonary thrombosis must always be borne in mind

Dr John B Deaver Philadelphia said that he had taught anatomy for many years, and he has since seen many prostates in the living as well as in the dead subject, but he has yet to see a middle lobe Normally the prostate consists of two lateral lobes and the supposed middle lobe is only an elongation of the right or left lateral lobe

As to the operation Both Dr Young and Dr Ferguson said that the infrapubic operation is vastly superior to the suprapubic Dr Deaver said he had taken out many prostates by the latter method in three and a half minutes and the patients got well The mortality is about equal The destruction of the neck of the bladder is by far greater in the infrapubic method than in the suprapubic Dr Young talks about leaving the prostatic urethra With all due respects to both Dr Ferguson and Dr Young Dr Deaver did not believe that they do what they think they do He has not succeeded in leaving the prostatic urethra He removes it in every instance and his patients recover and remain well The perineal operation has its place for the removal of small hard fibrous prostates but the large juicy adenomatous prostates should be enucleated from above Those are the cases in which the gland can be enucleated without any instruments except the fingers

So far as destruction of the neck of the bladder is concerned nothing is done to the vesical orifice in suprapubic prostatectomy What is done by the perineal route? What is the result? Incontinence, injury to the rectum, perineal fistulas He has yet to see any of these accidents occur in a suprapubic prostatectomy, and he has patients walking around who are 80 years of age Men recover the urinary function in a short time after the suprapubic operation

Dr J E Moore, Minneapolis, said there are two primary objects in operating on the prostate promptly in these early cases One object is to relieve the obstruction Dr Moore thought that the profession has arrived at a stage in prostatic surgery when it is wise to educate the medical man, the general practitioner, just as it did in the matter of appendicitis Surgeons ought to dwell a little on the early symptoms, as pointed out by Dr Ferguson Often, particularly in the rural districts, the first symptom that calls attention to the fact that a middle aged man has something wrong with his prostate is the sudden suppression of urine and many times the treatment prescribed then is what gives him his infected bladder and kidneys, giving rise to one of those septic cases from which surgeons get their mortality The treatment at the beginning is very essential If the general practitioner will learn that when a man gives a history of dribbling of urine or frequent urination, suppression or full bladder, that that man has a prostate that needs looking after He should think of consulting a surgeon in the matter and get at the bottom of the trouble He will do his patient much good by refraining from infecting his bladder by improper treatment

The next danger point is the catheter The catheter is infinitely more dangerous to the prostatic than is the operation All surgeons agree on that The technic is still a bone of contention Dr Moore said he was one of the first in this country to advocate the perineal route earnestly and that still is his operation of choice but it does seem to him that it is wise to go at most of these things in a level headed way A man can not do his best if he makes the case fit the operation rather than to make the operation fit the case Since he has learned to do the suprapubic operation he has felt it his duty several times to operate by that route where the prostate was very large and projected into the bladder So that now, while the perineal operation is the operation of choice with him he also does the other operation when it is necessary and he finds it more frequently indicated every day If the general practitioner can be educated up to the dangers of obstruction surgeons will get these cases earlier and have a comparatively low mortality because the mortality comes from neglected or infected cases A certain number of these patients are impotent after operation but Dr Moore is sure that it is better to have these men in the fifth to seventh decade of life without procreative powers and live than to have them in the cemetery

Dr. A H Ferguson, Chicago said that he had no deaths in the first twenty one cases Then he had three deaths one from renal insufficiency, within forty eight hours This he would now look on as an unfavorable case for operation Another patient died in twelve hours from an overdose of morphin given during his absence from the city by a careless nurse The third patient died practically from old age and from being too emaciated to be operated on There are no permanent fistulas in any of his cases although there were some temporary fistulas extending over a period of from three months to a year and a half Injury to the rectum during operation, he said is more of a blunder than an accident There were two cases of secondary fistulas through the rectum the result of bad postoperative treatment not carried out by him This list does not include two deaths where he was consulted in the operating room and finally took part in finishing the operation Nor does it include five other deaths three from carcinoma and two from acute tuberculosis

Dr Ferguson said he was amazed at the stand Dr Deaver took in this matter because he can prove to [illegible] Deaver th
correctness of every statement he [illegible] r cen
of the cases he can save the [illegible]
the prostate through the perin
he said that obstruction of t

perineal prostatectomy after removing the mucous membrane, but it is an extraordinary thing to open the bladder, pass in the hand and rip out everything and then expect nothing wrong to happen He saw one case operated on suprapubically, and there was absolute stricture at the neck of the bladder, admitting only a filiform bougie

The mortality is the point on which the whole thing should hinge These old people should not be treated for the sake of usefulness to the surgeon, but because he wants to make them bless him as long as they live Dr Ferguson said he would rather have 5 per cent. of perineal fistulas than have 5 per cent of his patients in the grave Tuffier collected 2,227 cases with only 6 per cent of mortality by the perineal route Tenney and Chase of Boston collected 2,342 cases operated on by the perineal route and 667 operated on by the suprapubic route, with a mortality of 7 per cent on the one hand and 13 2 per cent. on the other

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GANGOSA

O J MINK, M D AND N T McLEAN, M D
Assistant Surgeons U S Army
U S NAVAL STATION, GUAM

DEFINITION—Gangosa a Spanish word meaning muffled voice, is the name employed by the Spaniards in the Ladrone and Caroline Islands to describe a disease characterized by a destructive ulceration usually beginning on the soft palate, pillars or uvula, and extending by continuity to the hard palate and nasal cavity larynx, and even to the face Active ulceration is followed after a variable period by cicatrization or chronic ulceration Mutilation always results. Constitutional symptoms are either slight or absent.

SYNONYMS—*Rhinopharyngitis mutilans* (Leys) *Ogo* (Chamorro)

HISTORY AND GEOGRAPHY

There is absolute proof that gangosa has existed in the Island of Guam for at least 150 years, and probably much longer In 1828 the Spanish Royal Commission sent to investigate conditions in the Ladrone Islands reported gangosa as being prevalent and recommended that these cases and cases of leprosy and large ulcerations be isolated on one of the smaller islands of the group This is the earliest official recognition of the existence of the disease and the name gangosa From these sources it is evident that the disease showed the same characteristics as at the present time The known distribution of gangosa is somewhat indefinite It exists throughout the Ladrone and Caroline islands The case from Panama, recently reported by Fordyce and confirmed by Arnold, is undoubtedly true gangosa [1]

Surgeon J F Leys,[2] United States Navy, has carefully studied the bibliography and mentions reports of rhinopharyngeal ulcerations in Fiji, British Guiana, Jamaica, Italy, Dominica and Nevis Inasmuch as Dr Leys, who is familiar with the disease as it exists in Guam, has recently discussed the cases found in Dominica and Nevis with Dr J Numa Rat, the recorder of these cases, the disease undoubtedly exists in the West Indies as well as in Polynesia

ETIOLOGY

General Prevalence—During the past year 125 cases have been examined Many of these were brought under compulsion by the authorities It is certain that the work of the past year did not include all the cases as many not yet apprehended are known to exist in various parts of the island A conservative estimate places the total number between 200 and 250 The population of the island being about 11 000, the ratio is 18 to 22 per 1 000 As the natives of the various parts of the island are intimately associated by religious, marital and commercial relations, no topographic distinctions can be made

Season—The limited number of cases seen during the period of invasion makes it impossible to give any definite statement concerning the effect of season.

Age—In a series of 80 cases the ages at the time of invasion were as follows

First decade	2
Second decade	38
Third decade	23
Fourth decade	13
Fifth decade	2
Sixth decade	2

The youngest ages at invasion were 3 and 9 years, the oldest were 54 and 59 years From these figures it appears that the majority of the cases start during the second and third decade

Sex—In the above series of 80 cases, 49 were in females and 31 in males

Immunity—No cases have been observed or recorded in whites Cases in persons of mixed white and native blood are infrequent The great majority of all cases appear in the pure-blood native The absolute and relative immunity in the white and mixed races respectively may be explained by the superior hygienic and dietetic surroundings of these races

Heredity—There is no evidence showing that heredity plays any part in the transmission of the disease.

Food—The native theory and that held by the Spaniards gives food a prominent place in the causation of the disease They believe that such foods as decomposed or very salty fish, especially if eaten raw, uncooked taro and native pepper are the direct causes of the disease This theory seems improbable The eating of tainted fish is not more frequent than in any other fish-eating community, and when eating the usual symptoms of ptomain poisoning occur Cases of gangosa rarely give a history of such poisoning The eating of very salty fish, raw taro and native pepper is not sufficiently frequent to explain the large number of cases Furthermore, cases are seen in natives eating the same food as the whites

A Manifestation of Syphilis—The disease has been considered a late manifestation of syphilis During the past year we have not seen syphilis of any type among the native population and do not believe it exists Our observations agree with those of Leys,[3] who states

> It (gangosa) appears in healthy and well developed persons of all ages, with no signs of hereditary *syphilis* in their own persons or in their brothers and sisters, and with no signs of syphilis in their parents   Acquired syphilis is a common disease in most races over nearly the whole world It is an extremely rare disease here, and neither primary nor secondary syphilis has been seen in a native during the past year, among thousands of persons treated for other diseases, including several prostitutes This disease is common here, and rare or unknown where syphilis is common Dr Daniels, who was in Fiji for years, states that there was no syphilis in Fiji at a time when the lesions in this disease were common The appearance of the primary lesion of this disease in otherwise healthy children of healthy parents, at 3, 4 and 9 years of age, excludes acquired syphilis

A Sequel of Yaws—Gangosa has been described as a sequel of yaws Only one of our cases gave a history of this disease While gangosa is limited to a few localities, yaws is a common disease in most tropical countries We see no reason to consider it as an etiologic factor

Specific Infecting Agent—Our observations lead us to believe that there is a specific infecting agent, the nature of which is as yet undetermined It is believed that in the transmission of the disease flies are an important factor The lesions of gangosa are so exposed that flies are attracted in great numbers, and, while feeding on the exudations, their legs, wings and bodies are contaminated They in turn may infect the patient directly or indirectly through the food The use in common by all members of the family of such articles as towels, clothing, pipes, cigars and betel-nut, with absence of dietetic hygiene, renders direct infection probable The individual vital resistance is lowered by overcrowding, 15 to 20 persons, as a rule, sleeping in a small, unventilated hut The resistance being lowered by such environment, the disease is easily transferred

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[1] Fordyce Jour Cut. Dis January 1906

[2] Leys Jour Trop Med., London Feb. 15 1906

[3] Leys Report of the Surgeon General, U S Navy 1905 p 93.

Inoculation—No experiments have been made or cases seen which would indicate that infection by inoculation occurs

MORBID ANATOMY

As the disease is not fatal, autopsy is only possible when death results from intercurrent diseases We have had but one case for autopsy

Autopsy—A male of 18 years Clinical diagnosis, native epidemic asthma Well developed and nourished, small muscular build Nose and upper lip were entirely destroyed and replaced by triangular opening leading to the pharynx. Bony parts forming roof of mouth absent. Cuticle between eyes and inferior maxilla was a mass of superficial scar tissue Tongue was normal Tonsils and pillars were replaced by scar tissue Larynx was normal Eyes were normal Brain was not examined Heart was hypertrophied Pericardium was normal Pleura firm, adhesions right apex and left base and apex

Lungs Right upper lobe firmly adherent, middle and lower lobes dark in color, bronchioles contain thin purulent fluid Left lung firmly adherent at apex and base, lower lobe dark in color, bronchioles contained thin purulent fluid Left pneumothorax Liver Large, pale and mottled in appearance (a condition frequently seen at autopsy here) Gall bladder filled with dark bile Kidneys normal Stomach distended but normal Intestines normal, contained large numbers of ascaris, hook and whip worms Pancreas in consistency increased

Cause of death Native epidemic asthma Sections of gangotic area were sent to the United States for examination

PATHOLOGIC HISTOLOGY

Fordyce states that the lesion was a granuloma, the nature of which could not be determined by the methods employed It could be differentiated from others of this class, like blastomycosis, actinomycosis, rhinoscleroma and lepra, by the absence of their specific microorganisms, from mycosis fungoides by the character of the infiltrate and the absence of fragmentation The histologic picture could be readily mistaken for tuberculosis, as the giant cells were numerous, with nuclei arranged peripherally Many independent foci containing three or four cells were encountered deep in the corium

SYMPTOMS

Onset—Only three cases have been observed from the earliest stages of the disease The majority of patients present themselves for treatment only after mutilation is marked In the three cases above mentioned the initial symptoms led to a diagnosis of tonsillitis, pharyngitis and laryngitis of mild degree The patients were between the ages of 12 and 15 years and were in good physical condition Prostration was slight or absent All showed a slight rise of temperature and complained of soreness in the posterior nares and pharynx, with stiffness of the muscles of deglutition In one case a typical acute coryza was present Inspection at this time showed mild congestion of tonsils pillars, soft palate and uvula During the first week the general condition was practically unchanged

Local Symptoms—The throat symptoms became localized, and on the third day a patch of yellowish-gray membrane was observed on the soft palate in the first case, the uvula in the second and the right pillar in the third case The membrane was elevated, thick and extremely tenacious On removal the denuded surfaces bled freely Within twenty-four hours of the appearance of the membrane the typical ulceration was established On the area covered by the membrane a number of small depressions appeared The ridges between the depressions and the membrane were rapidly absorbed The ulcer, now about one-half inch in diameter, had a punched-out appearance, with undermined edges and a deep, uneven floor, covered with a yellowish-white, very offensive discharge It was surrounded by a zone of inflammation about one-fourth inch in width The depth of the ulcer rapidly increased until, in the case of the uvula and soft palate, the tissues were perforated by the seventh day These cases are still under observation

Course of the Disease—After the first week no marked changes occur in the character of the ulcer It progresses steadily, the rapidity varying with the individual case, destroying the bony and soft parts with equal ease This active stage may continue indefinitely or may become arrested at any period The average duration in those cases of our series, which later became quiescent, was about two years The active stage in those cases varied from one to seven years in duration

In seven cases, which have never been quiescent, the disease has progressed slowly, but steadily, the shortest having continued for ten and the longest for thirty-five years At any time during quiescence the disease may again become active This activity may continue indefinitely or pass into a second stage of quiescence These alternate periods of activity or quiescence may occur repeatedly When inactive the zone of inflammation is replaced by a more or less perfectly scarred area, from which an abundant and very offensive discharge pours At no time during either stage is the patient's general health materially affected

Fulminating Gangosa—This type occurs in children under 5 years of age, and all cases seen have been in gangotic families In some instances two or three children in the same family have been attacked The sudden onset, extreme prostration extensive membrane marked cervical adenitis and rapidly developing toxemia and dyspnea give a picture closely resembling diphtheria Surgeon C P Bagg, United States Navy, states that cultures from the throats were negative for Klebs-Loeffler bacilli Death occurs from toxemia rather than from dyspnea The great majority of these cases prove fatal within forty-eight hours but if the patient survives this period the typical mutilation rapidly develops and the case follows the usual course

COMPLICATIONS AND SEQUELÆ

All complications result from the direct extension of the disease and vary in severity with the extent of ulceration The principal parts which may be involved are the nose hard palate and superior maxilla larynx, eyes face and teeth

Nose—The extensive destruction of the deeper parts may totally destroy this organ The septum and turbinates are early attacked The supporting [illegible] destroyed, the external soft parts sink

TABLE OF CASES

General History			History of Disease (Years)			Present Condition						
No	Age and Sex	Family History	Duration	Active	Quiescent	Tonsils and Pillars	Uvula and Soft Palate	Hard Palate	Larynx	Nose	Eyes	General Condition
1	50F	Good Only case	30	20	10	Destroyed	Destroyed	Perforated	Unaffected	Flattened and septum perforated	Unaffected	Excellent.
2	63F	Good Only case	2	1½	½	Unaffected	Very slightly affected	Unaffected	Unaffected ,	Flattened and septum perforated	Unaffected	Excellent.
3	16F	Good Only case	13	13		Slightly affected	Unaffected	Unaffected	Unaffected	Destroyed	Unaffected	Excellent Deaf 13 years
4	15M	Good Only case	8	8		Destroyed	Destroyed	Badly necrosed	Badly ulcerated	Destroyed	Destroyed	Excellent. Voice hoarse and totally blind
5	36M	Good Only case	10	½	9½	Slightly affected	Destroyed	Perforated	Badly ulcerated	Septum destroyed	Unaffected	Excellent. Voice hoarse
6	[illegible]M	Good Only case	22	20	20	Destroyed	Destroyed	Badly scarred perforated	Unaffected	Flattened	Unaffected	Excellent.
7	47M	Bad Other cases	29	2	27	Destroyed	Destroyed	Badly scarred, perforated	Unaffected	Partially destroyed	Unaffected	General muscular paralysis
8	30M	Bad Father tbc ; mother gangosa	4	2	2	Slightly affected	Uv destroyed S P v s affected	Perforated	Badly ulcerated	Flattened	Unaffected	Excellent Voice absent
9	27F	Only case Father tbc	5	2	3	Destroyed	Destroyed	Perforated	Unaffected	Flattened	Unaffected	Excellent.
10	42M	One other case Sister tbc	27	1	26	Destroyed	Destroyed	Perforated	Unaffected	Flattened.	Unaffected	Fair Cervical adenitis
11	47F	Bad Other cases	17	1	16	Unaffected	Unaffected	Unaffected	Unaffected	Destroyed	Unaffected	Fair Large ulcer L F A
12	19M	Only case Father, tbc	1/12	1/12		Unaffected	Very active ulceration	Slight active ulceration,	Unaffected	Unaffected,	Unaffected	Excellent
13	28F	Bad Mother tbc ; father gangosa	7	5	2	Slightly affected	Unaffected	Unaffected	Slight ulceration	Flattened	Unaffected	Excellent Voice hoarse
14	62M	Good Only case	23	3	20	R. destroyed	Right side destroyed	Right side perforated	Voc cords scarred	Unaffected	Unaffected	Excellent Voice absent
15	40M	Good Only case	12	1	11	Destroyed	Destroyed	Perforated	Slight ulceration.	Destroyed	Right eye destroyed	Fair Healed lupus scars
16	49F	Unobtainable	8	1	7	Destroyed	Uv destroyed S P v s affected	Unaffected ,	Unaffected	Unaffected	Left eye destroyed	A leper
17	19F	Good Only case	9	1¾	7¼	Destroyed	Destroyed	Perforated	Slight ulceration	Septum destroyed	Active destruction	Poor Lupus neck face and chest
18	57F	Good Only case	34	10	24	Destroyed	Destroyed	Perforated	Slight ulceration	Destroyed	Active destruction	Excellent.
19	24F	Good Only case	14	7	7	Unaffected	Partially destroyed	Unaffected	Unaffected	Unaffected	Unaffected	Excellent
20	46F	Bad All affected	35	35		Destroyed	Destroyed	Extensive necrosis	Badly ulcerated	Totally destroyed	L destroyed R ulcerated	Good, except asthma Voice hoarse
21	22M	Bad All affected	5	5		Destroyed	Destroyed	Perforated	Badly ulcerated	Totally destroyed	Unaffected	Excellent Voice hoarse
22	25F	Only case Father, tbc	13	13		Destroyed	S P unaffected Uv destroyed	Unaffected	Badly ulcerated	Posterior ulceration	Unaffected	Excellent.
23	17F	Uncle, gangosa	7	4	3	Badly scarred	Uv destroyed S P perforated	Unaffected	Unaffected	Destroyed	Unaffected	Excellent
24	21F	Good Only case	11	11		Destroyed	Destroyed	Extensive necrosis.	Badly ulcerated	Entirely destroyed	Lower lids destroyed	Poor Large ulcers L F A
25	30M	Bad All affected	14	2	12	Destroyed	Partially destroyed	Extensive necrosis	Unaffected	Flattened	R lower lid destroyed	Good
26	24M	Bad All affected	6	6		Destroyed	Destroyed	Extensive necrosis.	Slight ulceration	Destroyed	Unaffected	Good Voice hoarse
27	21M	Only case Cousin, tbc	2	2		Destroyed	Uv destroyed S P perforated	Unaffected	Badly ulcerated	Unaffected	Unaffected	Excellent Voice almost gone
28	56M	Fair Cousin, gangosa	40	2	38	Destroyed	Uv destroyed S P perforated	Perforated	Badly ulcerated	Partially destroyed	Unaffected	Excellent Voice absent Deaf 26 years
29	[illegible]F	Only case Father and brother, lepers	10	4	6	Destroyed	Slightly affected	Perforated	Slight ulceration	Flattened	Unaffected	Fair A leper
30	37F	Mother gangosa	7	2	5	Destroyed	Partially destroyed	Perforated	Slight ulceration	Partially destroyed	Unaffected	Fair A leper
31	62M	Good Only case	50	2	48	Destroyed	Destroyed	Perforated	Slight ulceration	Partially destroyed	Unaffected	Excellent
32	34F	Mother tbc ; father gangosa	28	1	27	Destroyed	Destroyed	Perforated	Unaffected	Partially destroyed	Unaffected	Excellent.
33	38F	Good Only case	10	½	9½	L T destroyed	Slightly ulcerated	Perforated	Unaffected	Partially destroyed	Unaffected	Excellent
34	40F	Good Only case	7	7		Destroyed	Slight ulcerations,	Unaffected	Unaffected	Very slight ulceration	Unaffected	Excellent
35	46F	Good Only case	21	21		Destroyed	Destroyed	Perforated	Slight ulceration	Septum destroyed	Unaffected	Excellent Voice hoarse
36	38F	Good Only case	22	1	21	Destroyed	Destroyed	Perforated	Slight ulceration	Unaffected	Unaffected	Excellent. Voice hoarse
37	25F	Good Only case	6	6		Unaffected	Uv slightly ulc.	Unaffected	Slight ulceration	Unaffected	Unaffected	Excellent Voice hoarse
38	66F	Good Only case	12	1	11	Unaffected	Unaffected	Unaffected	Unaffected	Partially destroyed	Unaffected	Excellent
39	21F	Poor Father, tbc ; mother gangosa	9	2	7	Slightly affected	Slightly affected	Perforated	Unaffected	Flattened and septum destroyed	Unaffected	Good Scars of old ulcer, large joints, chest and neck
40	37F	Good Only case	24	14	10	Destroyed	Destroyed	Perforated	Unaffected	Flattened	Unaffected	Fair Many scars of old ulcers
41	41F	Fair Mother tbc	12	2	10	Destroyed	Destroyed	Perforated	Unaffected	Destroyed	L destroyed R lids destroyed	Poor A leper

TABLE OF CASES—Continued.

General History			History of Disease (Years)			Present Condition						
No.	Age and Sex	Family History	Duration	Active	Quiescent	Tonsils and Pillars	Uvula and Soft Palate	Hard Palate	Larynx	Nose	Eyes	General Condition
42	18M	Good Only case Mother a leper	2	1	1	Destroyed	Destroyed	Perforated	Slight ulceration	Flattened	R lower lid ulcerated	Good Voice hoarse
43	15F	Good Only case	4	2	2	Destroyed	Destroyed	Scarred	Unaffected	Destroyed	R lower lid ulcerated	Excellent
44	12F	Good Only case	2	1	1	Destroyed	Destroyed	Perforated	Unaffected	Destroyed	L lower lid ulcerated	Excellent
45	10M	Good Only case	24	9	15	Destroyed	Destroyed	Destroyed	Unaffected	Destroyed	L destroyed R unaffected	Excellent Feeds through nasal opening
46	21M	Good Only case	6	1	5	Unaffected	Unaffected	Unaffected	Unaffected	Destroyed	Unaffected	Excellent
47	23M	Good Only case	9	4	5	Destroyed	Uvula destroyed S P unaffected	Perforated	Unaffected	Destroyed	Unaffected	Excellent
48	18M	Good Only case	22	1	21	Destroyed	Destroyed	Perforated	Unaffected	Flattened	Unaffected	Excellent
49	39F	Good Only case	6	1	[illegible]	Destroyed	Destroyed	Perforated	Unaffected	Destroyed	Destroyed	Excellent.
50	14F	Good Only case	4	1	3	Unaffected	Uvula unaffected S P perforated	Unaffected	Unaffected	Unaffected	Unaffected	Excellent.
51	[illegible]9M	Good Only case	22	13	9	Scarred	Destroyed	Perforated	Unaffected	Destroyed	Destroyed	Poor A leper
52	11F	Bad Four other cases	4	3	1	Destroyed	Destroyed	Perforated	Unaffected	Active ulceration	Unaffected	Excellent
53	33M	Bad Four other cases	8	1	7	Destroyed	Uvula unaffected S P perforated	Perforated	Slight ulceration	Destroyed	Unaffected	Excellent Voice hoarse
54	14M	Bad Three other cases	1	1		Destroyed	Destroyed	Perforated	Unaffected	Unaffected	Unaffected	Excellent
55	38F	Fair Only case Two cases of leprosy	1	1		Destroyed	Uvula unaffected S P scarred	Scarred	Slight ulceration	Flattened	R lower lid ulcerated	Good
56	30F	Good Only case	1	1		Destroyed	Destroyed	Scarred	Unaffected	Filled with adenoid growth	Unaffected	Fair Mass of adenoid tissue protrudes from nose to right cheek
57	30M	Good Only case	12	2	10	Destroyed	Destroyed	Perforated	Unaffected	Flattened	Both lids ulcerated	Good
58	18F	Bad Two other cases	10	2	8	Destroyed	Destroyed	L side destroyed R side scarred	Slight ulceration	Unaffected	Unaffected	Excellent. Voice hoarse
59	22M	Bad Mother gangosa	4	2	2	Destroyed	Scarred	Perforated	Unaffected	Flattened	Unaffected	Excellent
60	60F	Good Only case	1	1		Destroyed	Destroyed	Active ulceration	Slight ulceration	Unaffected	Unaffected	Excellent Voice hoarse Very active
61	13M	Bad Mother dead of gangosa	2	1	1	Destroyed	Active ulceration	Active ulceration.	Unaffected	Flattened Ulcer on right side	Unaffected	Good
62	20M	Good Only case	2	1	1	Destroyed	Destroyed	Destroyed	Unaffected	Sunken Three-lobed anterior opening	Unaffected	Good Large ulcer on left leg
63	12M	Bad Uncle gangosa	2	1	1	Destroyed	Destroyed	Perforated and scarred	Slight ulceration	Sunken Two lobed	Unaffected	Good Voice hoarse
64	21M	Good Only case	1	1		Unaffected	Unaffected	Unaffected	Unaffected	Septum destroyed	Unaffected	Good All internal nasal structure destroyed Nose inflamed
65	57M	Good Only case	12	1	11	Destroyed	Destroyed	Scarred	Unaffected	Partially destroyed	Unaffected	Excellent
66	6M	Good Only case	1	1		Scarred	Scarred	Scarred	Unaffected	Unaffected	Unaffected	Excellent.
67	26F	Bad Brother gangosa	1	1		Unaffected	Destroyed	Destroyed	Slight ulceration	Unaffected	Unaffected	Excellent. Voice hoarse
68	15M	Bad Sister gangosa	1	1		Destroyed	Destroyed	Perforated	Unaffected	Flattened and softened	Unaffected	Excellent
69	20M	Good Only case	2	1	1	Destroyed	Destroyed	Destroyed	Slight ulceration	Destroyed	Unaffected	Excellent Voice hoarse
70	47M	Bad Two other cases	27	1	2[illegible]	Destroyed	Destroyed	Almost destroyed	Unaffected	Destroyed	Lower lids destroyed	Good Upper lip absent Face badly scarred
71	19F	Good Only case	25	1	24	Destroyed	Destroyed	Perforated	Slight ulceration	Flattened and sunken	Unaffected	Good Voice hoarse
72	21F	Good Only case	1	1		Destroyed	Scarred	Scarred	Slight ulceration.	Scarred flattened and drawn to the right	Unaffected	Good Mouth badly scarred Voice hoarse
73	[illegible]M	Good Only case	3	1	2	Destroyed	Right side of S P destroyed	Perforated	Unaffected	Flattened L nostril partially destroyed	Unaffected	Good
74	[illegible]F	Good Only case	16	1	15	Destroyed	Destroyed	Scarred and perforated	Unaffected	Sunken tip turned upward	L lower lid destroyed	Good Face badly scarred
75	18M	Good Only case	6	1	[illegible]	Destroyed	Destroyed	Scarred	Unaffected	Destroyed	L lower lid destroyed	A leper Face badly scarred
76	13F	Bad Three other cases	1	1		Pillars scarred L T perf	Scarred	Scarred	Extensive ulceration	Unaffected	Unaffected	Good Very hoarse voice
[illegible]	17[illegible]	Only case Mother the	[illegible]1-2	12		Unaffected	Destroyed	Perforated	Extensive ulceration	Unaffected	Unaffected	Fair Leper Very hoarse voice
[illegible]	[illegible]01	Good Only case	1	1		Scarred	Scarred	Scarred	Unaffected	Destroyed Active ulceration	Unaffected	A leper Face badly scarred
[illegible]	[illegible]	Good Only case	6	½	5½	Destroyed	Destroyed	Destroyed	Unaffected	Destroyed	Both lids destroyed L staphyloma.	A leper Face badly scarred
80	11F	Good Only case	1	1		Scarred	Scarred and contracted	Slightly scarred	Unaffected	Scarred externally	Unaffected	Good Face badly scarred
81	[illegible]M	Good Only case	12	1 12	1 12	Unaffected	S P perforated to post nares	Unaffected	Unaffected	Unaffected	Unaffected	Excellent (New case)

absorbed, the organ being replaced by an opening The sense of smell is destroyed early in the course of the disease

Hard Palate and Superior Maxillæ—The hard palate may be perforated or entirely destroyed The central portions of the superior alveolar arches are frequently destroyed This causes loss and deformity of the upper teeth This deformity produces the typical "cleft palate voice" from which the disease takes its name

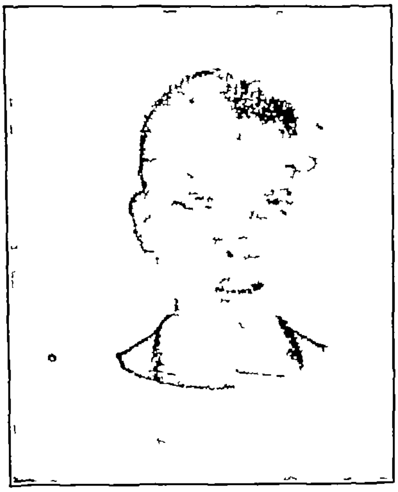
Fig 1—Case 52 Extensive involvement with no external mutilation.

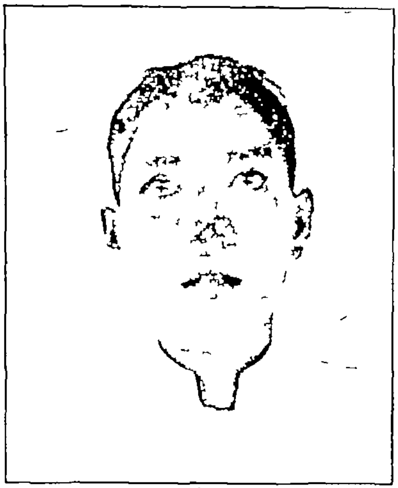
Fig 2—Case 62 Flattened nose.

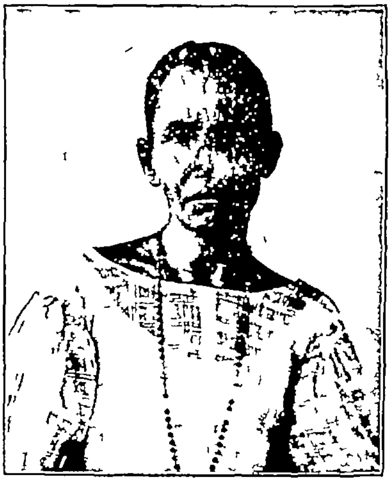
Fig 3—Case 35 Notice extensive scarring of upper lip

Larynx—In 81 cases the larynx was involved in 33 volvement varies from slight ulceration to total de- ction, and as a result the voice is husky or absent

Face—Ulceration extends peripherally from the oral and nasal openings or from the common opening when the upper lip is destroyed

Eyes—These become involved when facial ulceration destroys the lids The eyes were involved in 21 cases The sequence in destruction is conjunctivitis, corneal opacity, staphylomata and finally blindness

Tongue—The tongue and muscles of deglutition are unaffected

Hearing—Hearing was affected in only 2 cases No sequelæ have been observed

DIAGNOSIS

To those who have ever seen a case of gangosa, diagnosis offers no difficulty The primary rapid ulceration, consequent mutilation and subsequent chronic ulceration produce a picture seen during the active stage During the quiescent stage the ulceration is replaced by scar tissue

Differential Diagnosis—Gangosa is differentiated from (1) leprosy, by the sudden onset with immediate localization, absence of fatal termination and absence of *B lepræ* (2) Lupus of the mucous membranes, by the sudden onset, local appearance of the throat symptoms, absence of tubercle bacilli and absence of tuberculosis elsewhere (3) Syphilis, by the absence of history and symptoms and the failure of specific treatment The disease bears no clinical resemblance to blastomycosis, actinomycosis, rhinoscleroma or mycosis fungoides

Fulminating gangosa is diagnosed from diphtheria by the absence of Klebs Loeffler bacilli and by the typical mutilation in those cases which survive.

PROGNOSIS

Except in the fulminating type, the disease *per se* is never fatal The mutilations and complications are permanent and cause corresponding disability Intercurrent diseases follow a typical course and are not severer than in those unaffected with gangosa

PROPHYLAXIS

The contagiousness of the disease has been recognized by the Spaniards in Guam for almost a century They established a colony for the segregation of these cases, which was discontinued at the time of the American occupation. There is good evidence showing that this abandonment of segregation has increased the prevalence of the disease in Guam In view of this fact, the governor of Guam, on April 9, 1906, issued the following order

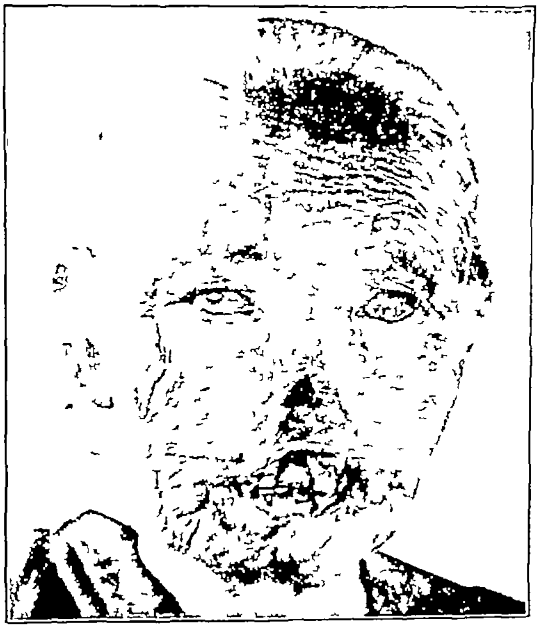
Fig 4.—Case 38 Old scarring with labial destruction

EXECUTIVE GENERAL ORDER NO 111

In view of the existence in this island of an infectious and contagious disease known as *Gangosa*, it is of paramount neces sity, in the interest of humanity and for the protection of society, to adopt proper measures to arrest the spread of that loathsome and dangerous malady Less rigorous methods being either futile or of doubtful efficacy, it is hereby ordered and decreed that

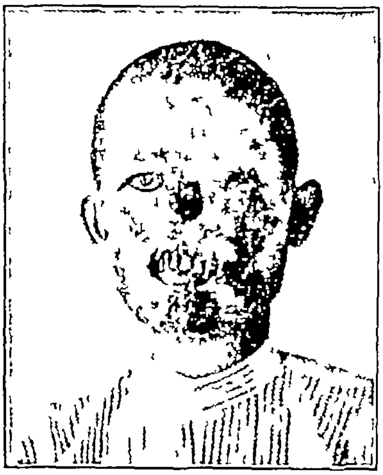

Fig 5—Case 45 Extensive skin involvement has destroyed left eye.

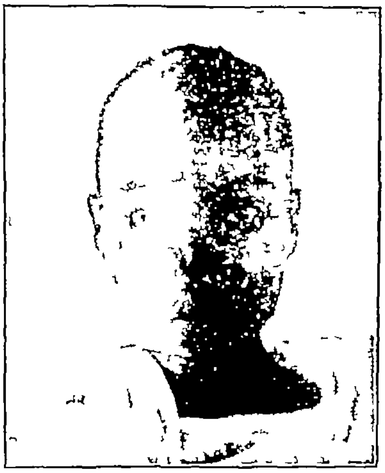

Fig 6—Case 42 Notice beginning of total destruction of nose.

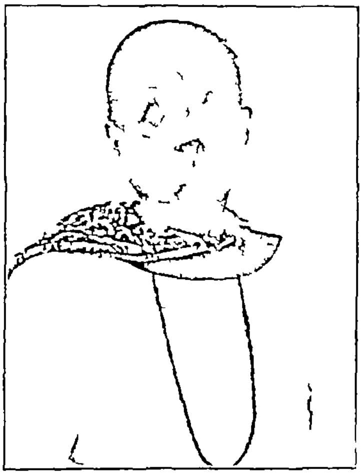

Fig 7—Case 20 Very severe scarring left eye destroyed.

1 All persons within the Island of Guam who, on examination before a board consisting of all the medical officers of the Naval Station of the island ordered by the governor, are found to be suffering from *Gangosa*, shall, on the unanimous recommendation of said board be segregated in the same manner and under the same conditions, rules and regulations as are now provided by General Order No 43, in the case of lepers

2 The place of segregation shall be a tract of land in the locality of Ypao, district of Agna, to be known as the Ypao Colony, having an area of about six (6) hectares, the boundaries of which shall be constructed of convenient and suitable material and bear the sign Ypao Colony

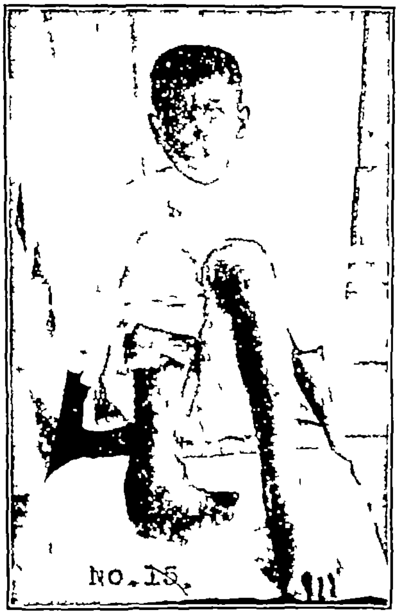

Fig 8—Case 75 Notice co-existence of leprosy and gangosa

3 This order shall take effect on the eighteenth day of April, 1906 T M POTTS, U S N, *Governor*

In the fulminating type rigid quarantine should be established, the unaffected members of the family being removed and kept under observation

TREATMENT

There is little doubt that treatment in the early stages limits the progress of the disease The treatment is essentially local and should aim to destroy the affected area Tincture of iodin applied freely appears to be the best agent for this purpose Lunar caustic, phenol and chromic acid have been used It is believed that in some cases the actual cautery would be the most effective agent An antiseptic mouth wash should also be used Tonic treatment when indicated should be used Potassium iodid even in large doses and long continued appears to have no effect on the disease In chronic cases deodorants should be used Potassium permanganate, in 1 per cent solution has proved the most advantageous When possible, complications should receive their appropriate treatment It seems reasonable to believe that the *x*-ray, Finsen light and radiotherapy would be of service in the treatment of this disease, more especially in the chronic external ulcerations In the fulminating type, treatment should be symptomatic, combined with active local disinfection

We desire to express our thanks to Surgeon C P Bagg, United States Navy, for valuable suggestions and assistance in the preparation of this article, and to K S Hart, United States Navy, for careful photographic work

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THE BACTERIA IN SCARLATINAL AND NORMAL THROATS *

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INTRODUCTION

It is a well established fact that streptococci are constantly found in great abundance on the tonsils of scarlet fever patients This was shown very clearly by the investigations of Weaver, Baginsky and Sommerfeld, Charlton, Charbade, Booker, Taugl, Klein, Kurth and others It is also well known that these organisms are frequently found on the tonsils of healthy persons, although not in such great abundance as on the tonsils of scarlet fever patients Hilbert, Tunnicliff, Dungern, Schweighofer and Widal and Bezancon state that they found them in all normal throats which they examined Others, however, did not find them so constantly Black found them on only 30 per cent of the normal tonsils which he examined Netter found them in 5 5 per cent., Kurth in 8 per cent., Podbielsky in 2 per cent and Dornberger in 45 per cent. of the normal throats examined by them In most of these investigations no detailed study was made of the streptococci that were found In some investigations glucose-broth tubes were inoculated with material from the tonsils, and if cocci were found in chains after incubation of the tubes it was concluded that streptococci were present. Apparently no further study was made of the cultures In consideration of this fact it was thought worth while to take up this question again and make a more detailed study of the different strains of streptococci and diplococci which may be isolated from scarlatinal and normal throats

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* Read in the Section on Pathology and Physiology of the American Medical Association at the Fifty-seventh Annual Session June 1906

* This article is from the Memorial Institute for Infectious Diseases and describes work which was aided by a [illegible] American Medical Association

METHOD OF STUDY

Through the researches of Schottmuller[1] and of Rosenow[2] we know that pneumococci produce green colonies in blood-agar plates while *Streptococcus pyogenes* produces small grayish colonies which are surrounded by a perfectly clear area of hemolysis Schottmuller also pointed out the fact that there are streptococci which produce green colonies in blood-agar plates, very similar to the pneumococcus colonies In this study I have made use of these facts in isolating *Streptococcus pyogenes* from material obtained from the tonsils A sterile cotton swab was rubbed against the tonsils in such a manner as to avoid the tongue as much as possible The swab was then rinsed in 1-1 5 c c of sterile broth and the latter was used immediately to inoculate three or four blood-agar tubes, and the same number of litmus inulin-agar[3] tubes, which were poured into plates and incubated for 24 to 48 hours at 36° C Blood-agar was prepared by melting plain agar tubes, cooling to 45° C and adding 5 c c of sterile defibrinated rabbit blood or human blood to each tube

After 24 hours' incubation it is possible to pick out the *Streptococcus pyogenes* colonies in the blood-agar plates, as they are small gray colonies which are surrounded by a perfectly clear area of hemolysis It must be remembered, however, that diphtheria bacilli and pseudodiphtheria bacilli may produce hemolyzing colonies which may closely resemble the streptococcus colonies Furthermore, I have occasionally found colonies of pneumococci and closely related organisms which produce considerable hemolysis and may therefore be mistaken for *Streptococcus pyogenes* colonies The pneumococcus colonies are not easily recognized in these plates as there are always found in the throat many chain-forming cocci which form green colonies like the typical pneumococcus colonies In all instances subcultures were made from 4 to 8 hemolyzing colonies and the same number of green colonies These cultures were studied morphologically and culturally and their fermentative power was tested in Hiss'[4] inulin serum-water medium or in a slightly modified medium which was prepared as follows Dissolve 5 grams of NaCl, 20 grams of peptone (Witte) and 20 grams of pure inulin in 1,000 c c of distilled water Add 20 c c of a 5 per cent solution of pure litmus and tube, putting 2 c c of the mixture into each tube, and sterilize in the autoclave After sterilization, add (with a sterile pipette) 2 c c of sterile heated ascites fluid[5] or preferably heated beef serum, to each tube and incubate for 24 hours before using The beef serum was collected without taking any special precautions, but was diluted with an equal volume of water and passed through a large Berkefeld filter, drawn off into 50 to 100 c c tubes and heated to 65° C for one-half hour on two successive days This medium was preferred to Hiss' serum-water because it was found that some pneumococci and some streptococci which have been recently obtained from blood cultures do not grow well in the latter

In the early part of this work no litmus inulin-agar plates were used but pneumococci were looked for among the green colonies in blood-agar plates In those cases subcultures were made and studied from 10 to 12 green colonies Organisms were classed as typical pneumococci only when they were found to be 1 Gram-positive cocci which grew chiefly in pairs on blood-agar or serum-agar slants, and 2, which fermented inulin, and 3, produced green or slightly hemolyzing greenish colonies in blood-agar plates

In the litmus inulin-agar plates most pneumococci produce red colonies which are easily recognized on the blue background, and as practically no other mouth bacteria produce red colonies in this medium[6] it is easy to isolate pneumococci from the mouth and throat with the aid of these plates Subcultures were, however, always made from 2 or 3 red colonies, and the organisms positively identified In no instance have I isolated an organism by this method which could not be classed as a pneumococcus, although some of these organisms form chains of considerable length in some liquid media and do not seem to have a well formed capsule.

RESULTS

A total of 154 throat cultures were made and examined as follows Normal, 51, scarlatina, 75, measles, 14, tonsillitis, 5, pneumonia, 5, and pharyngitis, 4 The findings differ very widely and must be considered under separate heads

Scarlatina.—All the blood-agar plates inoculated with material from scarlatinal throats contained many *Streptococcus pyogenes* colonies and varying numbers of green colonies This is shown by Figure 1 which is a photograph of one of these plates The cases may be roughly divided into three great groups 1 Those from which the plates contained mostly (60 to 95 per cent) *Streptococcus pyogenes* colonies—31 cases Two sets of plates contained only *Streptococcus pyogenes* colonies 2 Those from which the plates contained about as many *Streptococcus pyogenes* colonies as green colonies—23 cases 3 Those from which the plates contained fewer *Streptococcus pyogenes* colonies (15 to 40 per cent) than green colonies—21 cases As a rule, the *Streptococcus pyogenes* colonies greatly predominate over the other colonies when the inflammation of the throat is pronounced, and they rapidly decrease in number with the subsidence of the throat symptoms When the throat symptoms are mild the proportion of *Streptococcus pyogenes* colonies to the other colonies is often very small I have met with one exception to this rule in the case of a small girl who had a very bad throat, but the plates inoculated with material from it contained far more green colonies than *Streptococcus pyogenes* colonies A large proportion of the green colonies in this set of plates were typical pneumococci which proved to be highly virulent for rabbits

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[1] Münch med Wochft 1903 vol L p 909

[2] Journal of Infectious Diseases 1904 vol i p 308

[3] Prepared as described in the Journal of Infectious Diseases 1906 vol iii p. 183

[4] Jour Exper Med 1905 vol vi p. 317

[5] Great care must be observed *not to use ascites fluid* which contains fermentable carbohydrates. Each lot must be tested with organisms that are known to have great fermentative powers and if acid is produced it must not be used.

[6] See Journal of Infectious Diseases, 1906 vol iii, p 183.

Pneumococci were not looked for in 4 cases, but were found in 64 of the 71 throats that were examined for them—91 4 per cent Diphtheria bacilli were found four times and *B mucosus* and *B influenzæ* once *Staphylococcus aureus* and *citreus* and *Micrococcus tetragenus* were found occasionally, but these were probably contaminations from the tongue Gram-negative diplococci which form small brownish colonies were found quite frequently These were not always studied in detail, but some were identified as *Micrococcus catarrhalis*

Normal Throats—All blood-agar plates inoculated with material from normal throats contained many green and slightly hemolysing, often greenish, colonies *Streptococcus pyogenes* colonies were found in 30 of 51 throats which were studied, but were never present in large numbers (Fig 2), and were entirely absent in 21 cases In only 5 sets of plates did I find more than 10 per cent of *Streptococcus pyogenes* colonies, and in 18 sets there were only 1 per cent or less of these colonies Not infrequently one finds hemolyzing colonies in blood-agar plates which, on closer study, are found to be organisms that produce greenish colonies in subsequent plates Great care must, therefore, be exercised in deciding on the presence or absence of *Streptococcus pyogenes* colonies The small, slightly hemolyzing, often greenish, colonies of organisms other than *Streptococcus pyogenes* also are very puzzling and will be described more fully in a later publication It may be mentioned here that sugar fermentation tests were frequently used in classifying these organisms Pneumococci were found 45 times (90 per cent), and diphtheria bacilli 3 times Gram-negative diplococci and staphylococci were found frequently and *B mucosus* and *B influenzæ* once

Measles Throats—The findings in the throats of measles patients correspond closely to those of normal throats *Streptococcus pyogenes* was found in 9 of 14 throats which were examined (65 per cent) and pneumococci were found in 12 (85 7 per cent)

Tonsillitis—*Streptococcus pyogenes* colonies always predominated in these plates, but green colonies also were present Pneumococci were found in 4 of the 5 cases examined, but were not specially looked for in the other case In one case influenza bacilli were found in great abundance

Pharyngitis—Four cases of so-called pharyngitis were examined, but none of the blood-agar plates inoculated with material from these throats contained *Streptococcus pyogenes* colonies All plates contained many green colonies and some contained small brownish colonies The latter were chiefly Gram-negative cocci, but in one case they were influenza bacilli Pneumococci were isolated from all of these cases The finding of pneumococci in such a larger per cent of throats of persons not afflicted with pneumonia is in agreement with the work of the Commission for the Investigation of Acute Respiratory Diseases of the Health Department of the city of New York[7]

Pneumonia—Three of the five sets of plates inoculated with material from the tonsils of pneumonia patients contained very few *Streptococcus pyogenes* colonies and the other two sets did not contain any All blood-agar plates contained many green colonies and the litmus inulin-agar plates contained many red colonies Typical pneumococci were easily isolated from all plates

It will be noticed that green colonies were found in all blood-agar plates, except two sets, which were inoculated with material from scarlatinal throats Only a small proportion of these colonies are pneumococci and the remainder form a large group of organisms between the typical pneumococci and streptococci Some of these organisms seem to correspond to Schottmuller's *Streptococcus viridans*, but others are very closely related to the pneumococcus The organisms of this large group have very little virulence for rabbits and seem to be normal inhabitants of the throat, especially the pharynx[8]

VIRULENCE OF STREPTOCOCCI AND PNEUMOCOCCI ISOLATED FROM THROATS

Most hemolysing streptococci and some pneumococci isolated from scarlatinal and normal throats have some virulence for rabbits, but *Streptococcus viridans* has practically no virulence for these animals Thirty-one rabbits weighing from 900 to 1,200 grams were injected intraperitoneally with *Streptococcus pyogenes* cultures as follows Four rabbits with a suspension of two forty-eight-hour blood-agar slant cultures of organisms isolated from normal throats Three of these animals died and one remained well Twelve rabbits with the same amount of suspension of organisms isolated from scarlatinal throats Eight of these animals died and four remained well Eight rabbits with a suspension of one blood-agar slant culture of organisms isolated from normal throats Five of these animals died and three remained well Seven rabbits with a suspension of one blood-agar slant culture of organisms isolated from scarlatinal throats One of these animals died and six remained well

These results indicate that streptococci isolated from normal throats are slightly more virulent for animals than those isolated from scarlatinal throats This is in perfect agreement with the results obtained by Hilbert[9] and Tunnicliff[10]

Streptococcus viridans has a lower virulence for rabbits than *Streptococcus pyogenes*, as has already been indicated Nine rabbits weighing from 900 to 1 200 grams were injected into the peritoneum with two blood-agar slant cultures of different strains of these organisms, but only one of these animals died

Ten rabbits were injected with two blood-agar slant cultures of different strains of pneumococci isolated from normal and scarlatinal throats Four of these animals died and the other six remained well Fourteen rabbits were then injected with larger doses, but only five of these died There are no indications that pneumococci in scarlatinal throats are more virulent than those in normal throats with the one exception referred to above

CONCLUSIONS

Streptococcus pyogenes is constantly found in great abundance on the tonsils of patients suffering from tonsillitis and scarlet fever before the inflammation of the throat has subsided These organisms rapidly decrease in numbers with the subsidence of the throat symptoms

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[7] Journal of Exper Med 1905 vol vii No 5

[8] *A more detailed description of these organisms and of different strains of Streptococcus pyogenes will be given in the Journal of Infectious Diseases.*

[9] Zeitschr f Hyg 1899 vol xxxi p 381

[10] Trans Chicago Path Soc 1904 vol vi p 1[illegible]

Streptococcus pyogenes can not be considered a normal inhabitant of all healthy throats, although it was found in small numbers in 58 per cent of the normal throats in this series

Pneumococci of low virulence were found in 135 of this series of 154 throats

A large group of organisms which lies between the typical *Streptococcus pyogenes* and pneumococcus was found in all normal throats and in nearly all diseased throats These organisms have very little virulence for rabbits, and, as they are found in great abundance in practically all throats, they appear to be normal inhabitants of the throat

Streptococcus pyogenes from normal throats appears to have a slightly greater virulence for rabbits than these organisms from scarlatinal throats

I am indebted to Professor Hektoen for many suggestions and to Dr W L Baum for the privilege of getting throat cultures from patients under his care at the Cook County Hospital

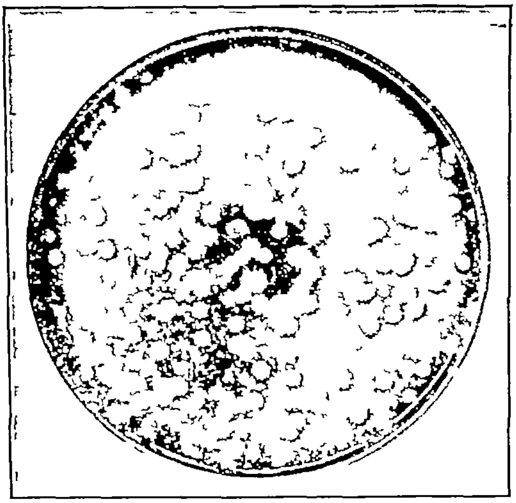


Fig 1—Photograph of a blood agar plate inoculated with material from a scarlet fever tonsil Many Streptococcus pyogenes colonies (hemolysing) and few small green colonies.

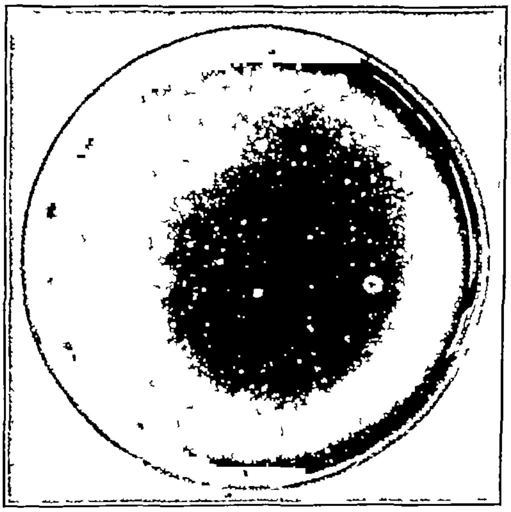


Fig 2.—Photograph of a blood agar plate inoculated with material from a normal tonsil Many small green and slightly hemo lysing colonies and 5 Streptococcus pyogenes colonies

DISCUSSION

Dr M J Rosenau, Washington, asked Dr Ruediger why he considers this hemolysis? It is commonly understood that in hemolysis, while there is a destruction of the red corpuscles and liberation of the hemoglobin there is no alteration of the coloring matter In the plates shown by Dr Ruediger there is apparently a destruction of the hemoglobin indicated by the clear bleached areas Perhaps this phenomenon is due more to a proteolytic ferment than to hemolysis

Dr Henry A Christian, Boston, asked if the amount of carbohydrates affect the growth of these bacteria, and what methods should be used in detecting the presence of carbohydrate and in proving that it is the carbohydrate that inhibits

Dr G W McCaskey, Fort Wayne, Ind, said that the presence of streptococci in the various secretions and exudates is of the highest importance as they furnish possible foci for active local or general infections He has made many routine examinations of the feces in the study of gastro intestinal disease and has found these organisms in a considerable proportion of cases Their number in the lower segments of the digestive tube is small in proportion to the great mass of colon bacilli, but if the search is sufficiently thorough they will be found more often In several cases he has had good reason to believe that intestinal streptococci were points of departure for serious infections In one such case previously published there was a fatal general streptococcus infection He found the streptococcus in the cerebrospinal fluid obtained by lumbar puncture, in the blood drawn from a vein in a sterile syringe and transferred immediately to 100 c.c. of bouillon at the bedside, while this organism instead of the colon bacillus was found to be the predominant one in the feces

Dr Gustav F Ruediger, Chicago, said he considered it hemolysis because it is a destruction of the corpuscles rendering the medium transparent The opacity due to the corpuscles is destroyed, but there is not a total destruction of the hemoglobin In regard to Dr Christian's question concerning the carbohydrates in ascites fluid, he had made tests with bacteria having a high fermentative power and not with copper test solutions Mixtures of equal volumes of sterile peptone solution and ascites fluid were inoculated with an organism that he knew would ferment inulin and if acid was produced the ascites fluid was discarded

In regard to the presence of diphtheria bacilli in the throats of scarlet fever patients, his percentage of cases giving positive results may be too low About one fourth of his cultures were made from the throats of patients who were known not to have diphtheria, because he was chiefly interested in the streptococci The other three fourths were made from patients as they came to the hospital. He does not believe that typical diphtheria bacilli are present as frequently as they are diagnosed by the internes, because in a number of cases he did not find them, although they were recorded on the history chart. The bacteriology of peritonitis is an interesting question and requires further study to ascertain whether the streptococci found are *Streptococcus pyogenes* or *Streptococcus viridans* He has had only one occasion to study the bacteriology of a fatal case of peritonitis and the streptococcus in that case produced green colonies in blood agar plates Schottmueller speaks of finding *Streptococcus viridans* in cases of peritonitis resulting from perforation of the appendix, also in perityphlitic abscesses, lung abscess, bronchitis, otitis media and various other infections of regions so connected with the pharynx and respiratory tract that the infection might well be caused by organisms that normally inhabit the throat.

Writer's Cramp Cured by Elastic Ligature—Hartenberg relates that he was consulted by a clerk who had suffered for fifteen years from intermittent writer's cramp He was ordered to apply an elastic ligature to the arm, above the biceps, according to Bier's technic, for twenty minutes morning and evening, not altering his habits otherwise The results were surprisingly good, as Hartenberg shows by specimens of the handwriting before and after, reproduced in the *Archives de Neurologie* for July, 1906

THE SYSTEM OF PERSONAL IDENTIFICATION BY FINGER PRINTS RECENTLY ADOPTED FOR THE U S ARMY

J R. KEAN, M.D
Major and Surgeon, U S Army
WASHINGTON, D C.

Some system of personal identification is a necessity in armies, and is of special importance in this country, not only for convenience of military administration to purge the Army of criminals, repeaters and other undesirable characters who may have gained admission to it by fraudulent enlistment, but also to protect the interest alike of the government and the individual in cases of claims against the former, based on the fact of military service It may also assist under some circumstances in the identification of the dead

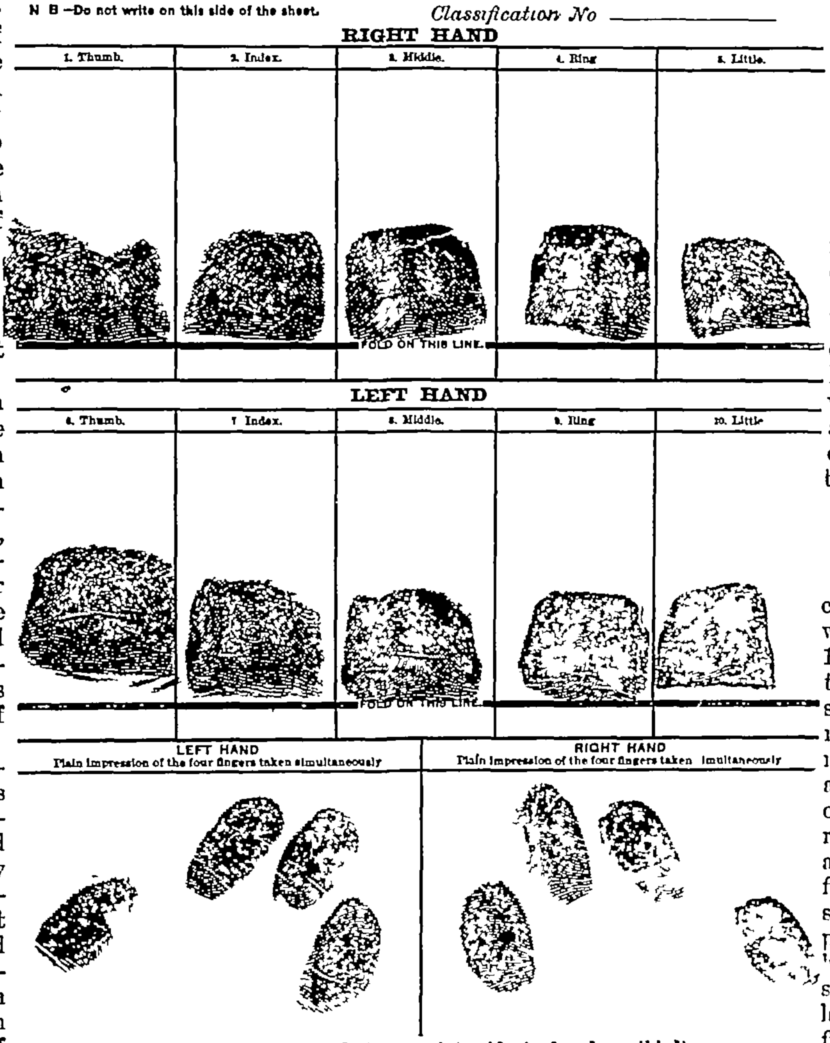


Fig 1 —Sample record finger prints side (reduced one-third)

MODIFIED BERTILLON SYSTEM

The system first adopted in the U S Army was an adaptation of the pathologic division of the Bertillon system, viz, description of moles, scars, tattoos, blemishes, etc, together with certain simple measurements and physical characteristics, such as height, color of hair, eyes and skin The complete Bertillon system was not adopted because it required the use of bulky and expensive instruments for exact measurements, and considerable practice and skill in their manipulation to avoid a degree of inexactness which would defeat the system, and also because of its disagreeable association with police methods of detecting criminals

This system, adopted in 1889, fulfilled very satisfactorily for our small Army during a decade the special purpose for which it was introduced, namely, to check the custom of "repeating," by which is meant the fraudulent reenlistment, usually under an assumed name, of deserters and dishonorably discharged men Besides ridding the Army of undesirable material which injured its discipline, lowered its moral standard and discredited its uniform, this system was found in the first seven years of its operation to have reduced desertions to the extent of an average of 1,300 a year as compared with the seven years preceding its adoption As the estimated loss to the government by each desertion for clothing, transportation, pay, etc, is $260, this represented a money saving of $338,000 a year

In the course of fifteen years, and especially subsequent to the Spanish War, when the Army was increased in size, although its use was not extended to volunteer troops, this system broke down because, after the number of cards became large, no system could be found of devising a method of extending the limited classification with any degree of accuracy On March 31, 1901, over 200,000 transcript cards were on file, and the number of cards with which each outline figure card of an original enlistment had to be compared became so great that the labor and time involved in the operation became excessive, so that it became inoperative even as to the delinquent class, while it was not adapted to the other uses mentioned above.

FINGER-PRINT SYSTEM

Under these circumstances a board was appointed Oct 11, 1905, to investigate the various systems of personal identification now in use, and, after an exhaustive study of the subject, it recommended the adoption of the finger-print system, supplemented by a photograph and brief personal description For the latter the outline figure card used heretofore is to be employed, but with fewer entries

The reasons given by the board for preferring the finger-print system of Galton, as improved by Henry, to the anthropometric system of Bertillon are 1 Its greater simplicity of operation 2 The small cost of the apparatus required 3 The fact that all the skilled work required is transferred to the central office, and so it is only there that experts are required 4 Greater rapidity of operation 5 Greater certainty of results

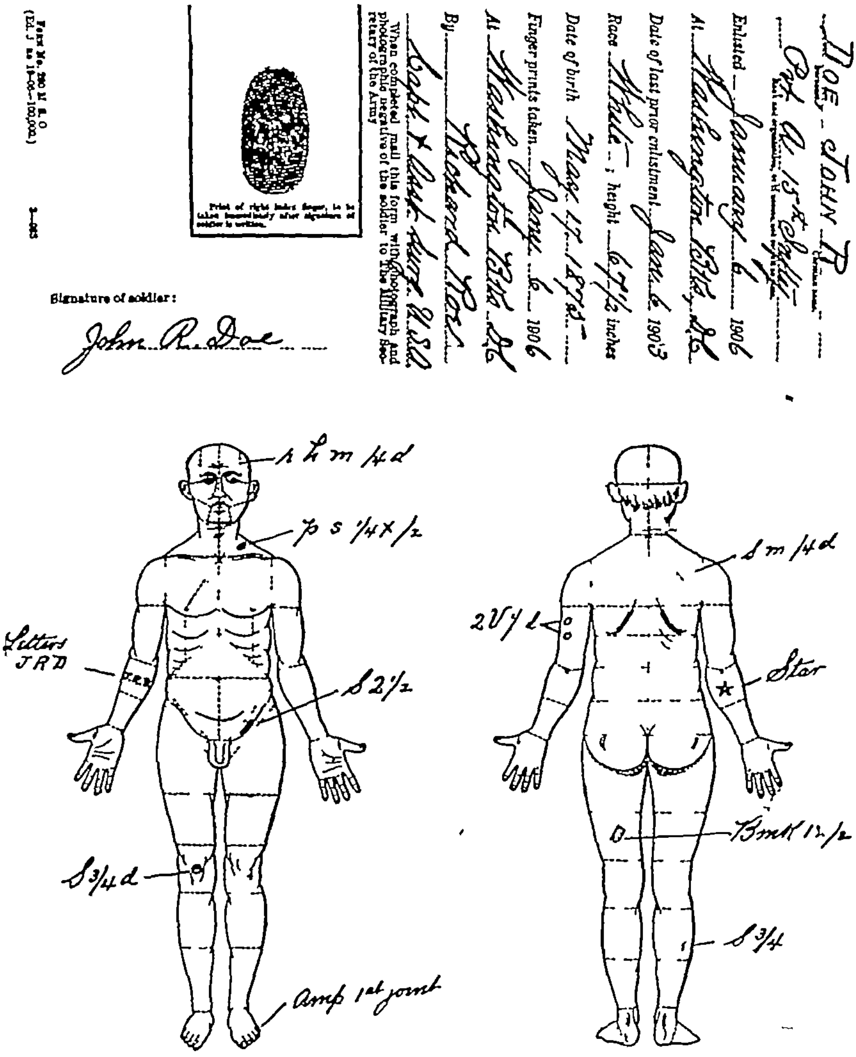
Galton has shown that the papillary ridges on the palms of the hands and the soles of the feet, in which are situated the mouths of the sweat glands, are clearly de veloped in the newborn child and are permanent throughout life, and as long after death as the epidermal structure remains undestroyed by putrefaction or other causes Also, the patterns made by these lines on the finger bulbs are unique and characteristic for each individual says Galton [1]

> There appear to be no bodily characteristics other than deep scars and tattoo marks, comparable in their persistence to these markings, at the same time they are out of all proportion more numerous than any other measurable features The dimensions of the limbs and body alter in the course of growth and decay, the color, quantity and quality of the hair, the tint and quality of the skin, the number and set of the teeth, the expression of the features, the gestures, the hand writing, even the eye color, change after many years There seems no persistence in the visible parts of the body except in these minute and hitherto disregarded ridges

As their persistence is thus co-equal with somatic existence, and their variety of pattern infinite, so as to exclude possibility of identity in different individuals, it is evident that in them we have a perfect basis for a system of personal identification, if only a practical method of classification can be devised which admits of extensive subclassification E R Henry, commissioner of police of the metropolis of London, at that time inspector-general of the Lower Provinces, India, has succeeded in doing this in a way which is both simple and satisfactory, and which has been widely adopted by the police departments in India, England, many cities of the United States, throughout Australasia and for the registration of native and Chinese laborers in South Africa The apparatus used is simple and inexpensive, ordinary white paper not too highly glazed, printer's ink, a piece of flat tin fastened on a board, and a roller for spreading the ink thereon In our Army there is also a form holder to hold the card in which the impressions are taken (Fig 1) Although the impression of any one finger is sufficient for identification, the impressions of all ten are taken for the purpose of classification

PROCEDURE

The process is as follows A few drops of printer's ink are placed on the tin and spread in a thin even film by means of the roller The operator then takes the right hand of the person whose finger print is to be taken and turning it palm out in a position of extreme pronation, places the thumb on the tin and turns the hand until the palm faces inward, thus applying a thin coating of ink to the palmar surface of the last joint of the thumb He then places the thumb on the paper in the upper right-hand compartment, with palm of the hand out (away from the body), and rolls the thumb until the palm is inward and the whole palmar surface of the last joint of the digit has been applied to the paper The same process is then gone through with for each finger of both hands This is called the rolled print, and is that used for identification Then the four fingers of each hand, held together, are touched to the ink film and then to the paper simultaneously without any turning movement These are called plain impressions and are useful to verify the sequence of the rolled impressions Thus, if, by error, the latter should not be taken in proper sequence the fact can be discovered and the error corrected from the plain impressions Finally, on the briefing fold on the back of the blank (Fig 2) the plain impression of the right index finger is taken just above the soldier's signature His conspicuous scars, tattoos and other marks are then noted on the outline figures, front and back, his height taken, the entries on the briefing fold filled in and the form is complete A photograph taken at a fixed distance of 54 inches with a standard lens, both of full face and profile, is then taken (Fig 3), and a print made from the negative This print and the negative, together with the



Doe, John R.

Pvt. Co. A 15th Infty

Enlisted January 6 1906

At Washington Bks, D.C.

Date of last prior enlistment Jan. 6 1903

Race White ; height 67 1/2 inches

Date of birth May 17, 1875

Finger prints taken Jany 6 1906

At Washington Bks D.C.

By Richard Roe

Capt. & Asst. Surg. U.S.A.

When completed mail this form with photograph and photographic negative of the soldier to The Military Secretary of the Army

Print of right index finger, to be taken immediately after signature of soldier is written.

Signature of soldier: John R. Doe

Form No. 280 M G O
(Ed J ne 19-06—100,000)

Fig 2.—Sample record, skin markings side (reduced one-third)

finger prints, are then sent by mail to the War Department, Washington for file

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[1] Henry E R Classification and Uses of Finger Prints p 18.

CLASSIFICATION

The method of classification and file of the finger prints is, briefly stated, as follows The patterns of finger prints are divided into two general classes, loops and whorls In the former are included the arches and in the latter the composites Each of the ten prints will be there, either a loop or a whorl, designated L or W, respectively and the ten digits, being taken in pairs, there will be four possible combinations of each pair, which are written as a key thus

LL	LW
WL	WW

Since we have the same number of combinations for the second pair, each of which can be combined with each arrangement of the first pair, the total number of combinations will be 16 for the two pairs, 64 for three and 1,024 for the five This number being the square of 32, a cabinet containing 32 sets of 32 pigeon holes each will be necessary for all combinations of the loops and whorls of the ten digits taken in pairs This cabinet is divided into four quarters by a vertical and a horizontal bisecting line, each containing 256 pigeon holes, each quarter in the same way into 4 eighths, each eighth into 4 sixteenths, and each sixteenth into 4 thirty-seconds, containing 4 pigeon holes apiece.

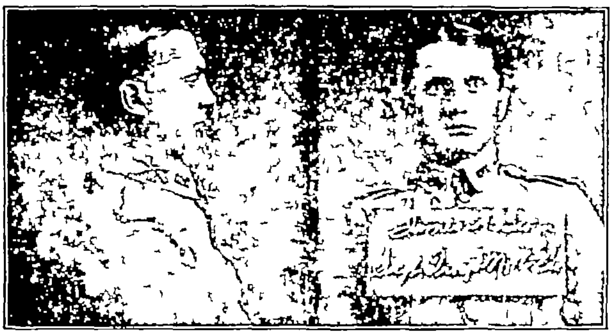

Fig 3—Form of photograph adopted as part of the identification record system (reduced in size)

If a finger print is received for file in which, for example the right thumb is a loop, the index a whorl, the middle finger a whorl the ring finger a loop, the little finger a loop, the left thumb a loop, the left index a loop, and so on, the formula for the print would be LW, WL, LL, WW, LW By reference to the key above given, the first pair of letters, LW, would be seen to be in the upper right quarter of the key, which would locate the card in the upper right quarter of the cabinet The second pair WL, would further locate it in the lower left sixteenth the third pair LL, in the upper left sixty-fourth division, the fourth pair, WW, in the lower right two hundred and fifty-sixth division, and the fifth pair, LW, in the upper right pigeon hole of that division

To subclassify the cards in a pigeon hole from each other and break up large accumulations in one compartment of the above primary classification a secondary system of classification is made based on the occurrence of arches and loops which are radial or ulnar in position with reference to the index *finger or fulcrum*

A still further differentiation is made by counting the number of ridges which intervenes between characteristic fixed points in the impression of a finger, known as the inner and outer terminus and by noting other characteristics of the ridges with reference to them For the details of this method the reader is referred to the little book by Henry [1]

BENEFITS OF THE SYSTEM

An expert in searching for a duplicate by these methods can find it in five or six minutes if it exists in a record of 100,000 cards

This system will be very valuable in obviating the necessity of much correspondence and collection of evidence at present required to prove identity in cases coming before the War Department and the Pension Bureau After the introduction of this system, any man who has had service in the Regular Army, can at once establish his identity by placing his right forefinger on the ink pad of an ordinary rubber stamp and making a finger print below his name Unknown dead brought from battle fields into field hospitals, or who die there, can in this way give a record which will lead to their identification, and a copy of the finger print buried in a vial with the body will be a permanent and certain identification of it It is expected that the new system will be put in operation soon after Oct 1, 1906

THE TREATMENT OF FRACTURES OF THE PATELLA *

JOSEPH RANSOHOFF, M.D, F R C S
CINCINNATI

This theme certainly lacks the element of novelty, since Barton gave the impulse toward its solution by operation, in 1834 Nor is there any dearth of numerical data to shed light on it Seven years after the report of the first successful cases of the antiseptic period by Cameron and Lister, Jalaguier, in 1884, was already enabled to collect ninety-four cases of patellar suture with five deaths from infection, not to mention a few disasters like ankylosis, amputation, etc Eight years ago Powers collected over seven hundred additional cases from literature and from personal reports The surgeon who is fond of figures, can find few richer fields for statistical deduction than is afforded by the enormous literature at his command The harvest may be rich I gladly leave it to another, for farming of this sort is little to my taste

The fact that the entire question is brought before this tribunal at this seemingly late day, by request, is proof of the unsettled state of some of its features, and perhaps in an irrelevant way of the slowness of the surgical mind to determine definitely that any one thing is the right thing to do, if another that is not very far wrong can be done

This brings us at once to the meaty feature in the contention between conservatism and operation in the treatment of fractures of the knee cap Good and even excellent results can be obtained by conservative measures in many cases, even if a restitution to the normal is not thereby attainable Operation is, therefore, always one of expediency only Many years ago it is said Malgaigne offered a large monetary prize to him who would show him a bony union of a broken patella In his classical brochure published in 1880 embodying a study of one hundred and twenty seven cases Hamilton concludes that under any plan of treatment a fibrous union of the fragments is all that can be expected, and that probably a fibrous union with a separation of half or three-quarters of an inch is as useful as a bony union.

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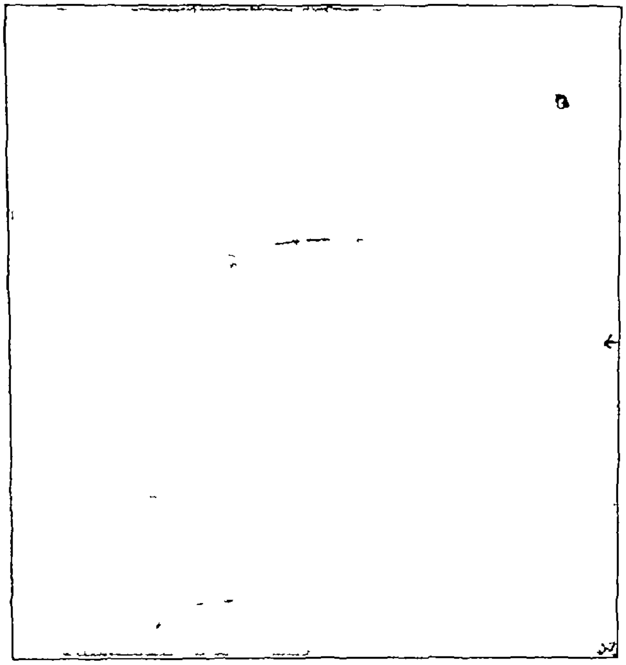
* Read in the Section on Surgery and Anatomy of the American Medical Association at the Fifty-seventh Annual Session June 1906

To understand the varying, functional limitations which may follow fractures of the patella, there must be a clear understanding of the physiologic value of the patella as constituting only a part of the extension apparatus of the leg. The subperiosteal removal of the patella in the cadaver does not annul the extensibility of the leg at the knee when traction is made on the quadriceps. This experiment is easily verified in the dissecting room. In a few cases in which the entire patella was removed *intra vitam* for tuberculosis, for example, there was little impairment of the power of extension. Complementary to the patellar ligament are the lateral expansions of the quadriceps tendon, the wings or "ailerons" of French anatomists, the fibers of which springing chiefly from the Vasti strengthen the joint capsule and are in part inserted into the enveloping fascia of the leg. Tillaux depicts the lateral patellar ligament as running as far back as the origin of the gastrocnemius.



Fracture in posterior surface of patella.

These anatomic data, far from new, explain the comparatively little limitation of motion at the knee, when even wide diastasis of the fragments exists. In two patients, whom I have been enabled to follow for long periods, in one of whom there was a fracture of each patella, I have seen the power of extension remain stationary in the face of a growing disastasis of the patellar fragments. The chief inconvenience of fibrous union in fractures nearly limited to the patella itself is the insecurity of the joint in extension. These patients fall easily, and it is a matter of common experience that with the laying aside of some protecting knee cap the patient sustains a refracture, or, more properly speaking, a tear through the uniting fibrous bands. In these refractures, if the appellation is justified by long usage, the rent of the parapatellar expansions of the quadriceps is of necessity more extensive than after the original injury. Every surgeon who has operated often for patellar fracture has operated after the recurrence of the second fracture because of the greater disability it entailed.

A logical conclusion of the foregoing considerations is the reserving of conservative treatment to cases in which the damage is largely limited to the patella. The absence of large diastasis and crepitus as indicating the approachability of the fragments without intervening fascial shreds would speak for non-interference. Fortunately, also, the etiology of the injury and at least one symptom helps us to recognize these cases. Direct fractures from falls or blows on the knee cap are of commoner occurrence than the pure indirect fracture from muscle strain. So far as I can make out from an examination of the histories of fifty-one cases observed in the Cincinnati Hospital twenty-six, or nearly 50 per cent., are clearly of this type of direct fracture. In only fourteen of the cases, or 27 per cent., was it fairly assumable that a cross strain produced the fracture. In this connection it is of importance to bear in mind that even direct fractures of the patella are almost always transverse. This I have demonstrated on the cadaver in over twenty subjects when the blow was delivered with the knee in forcible flexion. As might be expected, there is often no perceptible separation of the fragments and none is possible by most forcible traction on the quadriceps until the tear is made to extend into the parapatellar extensions. In experimental work along this line I have produced direct subperiosteal fractures, which could only have been demonstrated *intra vitam* by an x-ray exposure, or by the linear tenderness so characteristic of subperiosteal fractures in general. A study of the plates of fractures so produced shows that, contrary to every expectation, they often start from within, and that the gap is widest on the joint surface of the patella (see illustration). In some plates it appears that the fracture, when incomplete, leaves the cutaneous surface intact. I have no data to explain this, but the phenomenon may explain the hemarthros, which so often follows injuries of the knee, in which a fracture is not even suspected. Perhaps most frequent x-ray examinations of this kind will reveal fractures of the patella to be of commoner occurrence than they now seem. A longitudinal fracture could only be produced on the cadaver by a blow delivered on the lateral margin of the bone and did not show in the radiograms taken.

Although there is often considerable comminution in these direct fractures, the main line is transverse or nearly so. Here, however extensive the bone comminution may be, there is no great separation of the fragments until, as often doubtless happens, the lateral expansions of the tendon give way in the effort of the patient to save himself from falling after the bone has given way.

There is one way in which to ascertain the integrity of the parapatellar wings as proven in fracture of the patella. It is by the ability of the patient to extend his leg or to lift it with some little assistance, and that within a few days of the accident. This symptom might, in my judgment, be invested with the dignity of a sign pathognomonic of an intact capsule. Its presence should for many patients and most surgeons militate against operative interference, unless this be limited to the aspiration of the joint exudates.

Surely the words of Lister uttered thirty years ago in regard to the general question of operation for fracture of the patella are applicable now to the class of cases under consideration "No man is justified in performing this operation unless he could say with a clear conscience that he considers himself morally certain to avoid the entrance of any septic mischief into the wound"

It is beyond the scope of this paper to discuss any of the scores of methods of treatment by splints, adhesive dressings, elastic extension, plaster of paris and the many mechanical devices They may all be good, but they certainly all are bad if continued in use too long or if they are made the chief factor of the treatment. The intra-articular hemorrhage, if at all extensive, not only by pressure tends to keep apart the patellar fragments and to tilt them outwards, as has been shown in innumerable radiograms, but by aseptic irritation leads, after its slow absorption, to a shrinking of the synovial sac and to adhesions, which to a large extent account for the restriction of joint movements Where, therefore, non-operative measures are to be adopted, two factors are essential to good functional result First, aspirate the joint as soon as feasible, second, within ten days or two weeks, massage and passive movements should be made, and retentive dressings used only while the patient is permitted to go about on crutches There is no other way to forestall the atrophy of the thigh, which is an almost constant sequel of a broken cap and a menace to the other patella

The thought is uppermost that if the conservative treatment fails an operation may be beneficial if performed later as it is in other ununited fractures While my personal experience is limited, it has been sufficient to satisfy me that a hope based on such a thought will be frustrated The most difficult operations I have had have been in delayed cases with wide diastasis The approximation is so difficult that I have decided in such a case in the future to entirely extirpate the patella Indeed, one of the most satisfactory results I have had has been in compound, badly comminuted fracture, in which suturing was impossible, and in which practically all of the patella was excised If conservatism is to be practiced, it should not be as an expedient to be supplemented by a later suture, but on the assumption of the integrity of the patellar anatomic complement

At this juncture I would invoke the exercise of that common sense which regards not only the fracture of the patella, but considers as well the age, the occupation and the station in life of the subject of that fracture Manifestly, in functional value a fibrous union can never equal complete anatomic restitution, so that if there is any doubt as to the indication for either conservatism or operation the decision should be for the latter In young persons and in those of the middle decades of life, particularly of the working classes, the taking of some risk is justified, as it would not be in older persons and in those who do not need their legs to live Of the fifty-one cases tabulated for me treated at the Cincinnati Hospital, the average age was 39 Of the thirty-three non-operated cases, it was 40 years, and of eighteen operated cases, 35 years Only five of the total number of patients were over 50 and twelve were 30 years of age or under The entailment of some risk is justified when the indications for operation are clear particularly in view of the fact that even non-operated cases occasionally succumb Of our non-operative cases, two died —one of sepsis and the other of alcoholic leptomeningitis Of 223 cases investigated by Thiem, six died They were all subcutaneous fractures and were treated without operation

Of the fifty-one cases admitted into the City Hospital ward, eighteen, or over 35 per cent, were subjected to operation These figures do not reflect accurately the view point of the surgical staff, since nine of the non-operated cases either refused operation or left the hospital within the first week In fact, 45 per cent of the cases completely under control had some form of patellar suture made

I believe this fairly reflects the trend of surgical practice, since the statistical contribution of Powers was published eight years ago and discussed by the American Surgical Association It is that, if soon after the accident there is a diastasis of a third of an inch or more, a decided eversion of the fragments, where elevation of the limb is impossible and where there is a marked hemarthros, the indications seem clear that the patellar-capsular appendages are torn, and demand operative repair if even a fair result is to be attained Of the seventy-five surgeons who responded to Powers' inquiries, no less than seventeen expressed themselves as opposed to operation in any case Of those of the seventeen who were accessible and responsive to inquiries, Weir and Lilienthal have modified their views in favor of an operation in properly selected cases A T Cabot at first confined operation to compound fractures In a personal communication he assures me that in workingmen he now operates invariably Dr F Tilden Brown would to-day operate in all cases unless some unusual condition presented This swaying toward operation for fractures on the part of surgeons meets with an occasional exception Thus Mueller recently claims that the postoperative results are not as good nor as quickly obtained as those from conservative methods

It almost goes without saying that the only tenable objection to operation in suitable cases is the increased risk to limb and life That this exists can hardly be questioned by the warmest advocates of operation Of our own eighteen operations, one was followed by death from infection Of 711 cases collected by Powers, there were only three deaths from sepsis, with no amputations Powers himself does not believe that this represents the true mortality, and few are they who do not share his belief I know of no way in which to estimate the mortality of suturing the patella After looking over many series of hospital reports without finding more than an occasional death after patellar suture, I ought to be struck with the innocuousness of the procedure But I am not, and fear that I never shall be Twenty, even ten years ago the statement of Kocher seemed justified (Schmidt) that the technic of asepsis would have to make many advances before the indications for patellar suture should be much extended It can be stated, I think, that such advances have been made Certainly mishaps do not come as often in the last decade as they did in the first two after the publication of Lister's cases To bear this out, the bad results which are found in every large series, belong to the earlier years from which they are gathered Nevertheless the opening of the knee will always be attended with danger Therefore no surgeon should operate for patellar fracture, even when it is plainly indicated, except under conditions insuring the greatest measure of safety With these conditions in doubt, the peritoneum is confessedly a less dangerous field for operation than the knee joint Let him who would venture an operation bear in mind that the man with a fractured patella may die but the operation as one of expediency increases that danger somewhat

With proper regard to environment and skilled assistants, I am convinced that operation is not only justified, but positively demanded when the conditions point to extensive involvement of the capsular expansions beyond the patella. The question at once arises: When shall the suture be made? Even ten years ago the doctrine was current that the safest time for operation is after from fifteen to thirty days. In the eighteen cases of our series operated on, the operation was performed twice on the second day, once on the third, twice on the fourth, and in the remainder, with the exceptions to be noted, before the fifteenth day. The average day of the early operations was the seventh day after the accident. In two it was twenty-eight and thirty days, respectively, in another three months, and in yet another seventy-nine days. The only fatality occurred in the patient operated on seventy-nine days after the accident.

This experience has convinced me that the dread of early interference in fracture of the patella is now unwarranted, as it has been shown to be in most surgical conditions calling for operation. Although by reason of the large joint opened there is no absolute likeness between the patellar and other subcutaneous fractures, I am sure that few surgeons would hesitate to open a recent fracture of a long bone, if there were no other way of keeping the fragments in apposition than by bone suture.

The average of stay in the hospital of the early operations was thirty-nine days, of the average non-operative cases it was sixty days. Of the late cases it was eighty-four days. The greater length of time and extent of dissection required in cases of longer standing than two or three weeks reduces the probability of an undisturbed postoperative course. From the more recent literature it is apparent that postoperative mishaps occur oftenest in cases of long standing and where the suture is made for so-called refracture. Nor can the end-results be as good for the reasons above given when considering the results of conservative treatment. The difficulties encountered in the few late cases with wide diastasis I have seen have led me to abandon suture altogether in this class of cases. If I should find an operation at all indicated, I should, instead of endeavoring to overcome the great separation of the fragments, remove these fragments altogether and attempt a tendon plasty. The suggestion of Bergman and Pucet might in some cases be practicable. After dividing the patellar ligament at its attachment, it is moved upward as far as possible and fixed there with a metallic pin. It is certainly an ingenious way of approximating the fragments. The division of the quadriceps tendon transversely or in Y-shape has given good results to some operators.

It is manifestly improper to compare in a general way the end-results of operated cases with those conservatively treated. The comparison to be just must be made between fractures of the same degrees of severity, some of which have been treated one way and the rest by another. Of the difference in results there can be, in my judgment, no question to the unbiased investigator. Bony union along the length of the fracture, or at least along part of it, is the rule after suture, the proportion of such unions depending altogether on the methods of retaining them employed. As a compromise between conservative treatment and suture many plans have been devised to hold the fragments in position by means of sutures of wire or catgut introduced circularly around or behind and in front of the patella. The various procedures of Barker, Ceci, Kocher, Berger and the purse-string suture of Roberts come in this category of compromise operations and are of about equal worth. They are based on the dread of free exposure of the joint. Not having had much personal experience of them, my judgment is worth little. I, nevertheless, venture the opinion that in the very simple cases when they might do good they all are superfluous, and in the severer ones they fail of three essentials to a good result, namely, cleansing the joint of exudates, the removal of tendinous and periosteal fringes from between the fragments and close approximation of the torn parapatellar, tendinous expansions and of the bone fragments. These indications can only be met by an open operation, which allows full inspection of the damage done by the trauma and a clean method of repairing it. How to do this is a matter of technic, the details of which vary with different surgeons and should vary according to the conditions found.

In the eighteen operations above alluded to, suture with silver wire was done five times, with kangaroo tendon or chromicized catgut nine times and circumferential or tobacco pouch suture was used in four cases. In a number of cases, it is difficult to state how many, the bone suture was followed by periosteal catgut suture. From the record of our cases it does not appear that those sutured with wire fared better than those treated with animal suture material. Of course, we have met the tribulation of having the wire break. In one of the cases it was necessary to remove the wires after the patient left the hospital. Since most of our cases could not be followed, it is impossible to state what became of the wires in the remainder. From a rather extensive investigation of the literature I am inclined to believe that the use of properly prepared absorbable suture material is displacing the wire, although in some of the more recent series of case reports, such as Hamilton of Edinborough, Korte and Mikulicz, wire was almost exclusively used.

As very considerable difficulty is encountered when the fracture is near the apex of the patella and when it is stellate, the purse-string suture of whatever material used is more applicable than an attempt to use the interrupted suture after the ordinary way. I have been impressed with the method of Perarresi, who, after making a periosteal suture as carefully as possible, reflects a square flap from the anterior fibers of the quadriceps tendon over the broken patella, and sews it to the patellar ligament below. By this teno-plasty the eversion of the upper fragment is easily overcome. Furthermore since there is no drilling of the fragments, the danger of necrosis is avoided.

In my operations for fractured patella I have used the transverse incision in my earlier work. More recently I have used the curvilinear incision with convexity above or below. When the separation of the fragments is wide the best access to the parts can be obtained by an incision with an upward convexity. It is almost needless to add that the success of the operation depends on the repair of the parapatellar expansions of the extensor aponeurosis.

In two of the cases remaining longest in the hospital, a considerable degree of ankylosis remained. I believe the result was more satisfactory than if they had been discharged with a wide gap. Although an ankylosis can hardly be called a success, it is a matter of common observation that a locked knee if in good position does not materially lessen the capacity of the individual for even the hardest kind of work Between the serviceability of the locked knee and the flail joint there can be no question In properly selected cases the indications for an arthrodesis seem to me perfectly clear

To secure the best results after operation, the retentive dressing should be tentatively removed after two weeks and passive and some active movements encouraged by the end of the third week, at the latest the fourth week

In conclusion, I submit the following theses for your consideration

First —Fractures of the patella are often partial and subperiosteal and require no operative treatment even if recognized

Second —A master of aseptic surgery may operate in every case of patellar fracture where separation of the fragments can easily be recognized

Third —Where the diastasis indicates the involvement of the lateral expansions of the quadriceps, the indications for operation are plain, unless the valid contraindications alluded to in the body of the paper are present.

Fourth —The proper time for operation is the first week

Fifth —The operation ordinarily indicated is the open operation with suture of the lateral tears and fixation of the fragments with one or other method

Sixth —In old standing cases with very wide diastasis of the fragments, excision of the latter and suitable tendon plastic will probably give better results than bone suture

Seventh —The knee joint will always remain for him who occasionally does surgery a most dangerous field for operative interference For him a fracture of the patella should remain a *"noli me tangere"*

DISCUSSION

Dr Robert F Weir, New York, stated that, seeing the dangers that have followed in the wake of these operations for fracture of the patella for a long time, kept him from surgical intervention in their treatment. Since other surgeons, however, have shown such good results, and especially now that no finger or instrument is allowed to enter the joint and since he has seen the brilliant results which have followed this careful procedure, he has resorted to the operation in certain cases He found, however, that some things are yet to be said An *x* ray of their best cases showed that in a large proportion of them there was not a bony union of the fragments, but only a fibrous union. Furthermore, Dr Weir believes that only masters of surgery should operate in these cases of fracture of the patella, because it is the most risky operation we have to do to-day He would rather have his abdomen cut open than his knee joint. He has found that one surgeon had an amputation following a fracture of the patella and another had an ankylosis and a third a fatal result. At the Roosevelt Hospital, in New York, these patients are only operated on when there is good reason to believe that the tear runs into the fibrous tissues on both sides, but in cases in which the rent is only on one side, they are very apt to treat the case by the conservative method. Dr Weir declared, however, that notwithstanding that he does not resort to the operation in a restricted manner, if he were to sustain a fracture of the patella he would not want the knee joint opened

Dr Charles A. Powers, Denver, said that in the operative management of recent fractures of the patella there should be no contradiction on the part of the patient to the operation itself It should be definitely restricted to patients of suitable age, patients with healthy viscera and vessels, and patients who, after the pros and cons of the operation have been carefully explained to them, request the operation Some twenty or twenty five years ago Dr Weir said that antiseptic surgery was not 'cock sure' surgery That may be said to-day of aseptic surgery No man can open a knee joint and repair a patella with an absolute certainty that the patient will escape infection He expects that he will escape infection, the patient will probably have no trouble, but there is always an element of risk, and the patient himself must take it Dr Powers believes that it is better in recent cases to wait five or seven, or, perhaps, ten days before operating As to the operation itself, he advised the curved incision as recommended by Dr Ransohoff, the removal of the interposed aponeurosis from between the fragments, washing out of the blood clots and such suture as the surgeon may see fit to apply, the open operation, as Dr Ransohoff says, should always be done The results after the operative management in cases with a wide diastasis Dr Powers believes are better than in cases treated without operation, but the patient is the one to decide and to take the risk In old cases in which there is a wide separation and the fragments can not be approximated, scoring of the quadriceps extensor or its tendon or transplantation upward of the tubercle of the tibia will greatly permit the fragments to come together and a good suture can be made Dr Powers has never found it necessary to remove the patella

Dr. Arthur T Cabot, Boston stated that he began in this work by wiring only in compound fracture. Since then he has acquired the habit of wiring the patella in all cases that come to the hospital when they occur in laboring men, in whom it is necessary to get a quick result These men can not afford to lay up for six or eight or ten months to limber out a stiff knee When the patient is in good circumstances, and can give the time to limbering out the knee afterward, Dr Cabot frequently treats the case on the expectant plan by bringing the fragments together as closely as possible, but in those cases he thinks it is very important to put off passive motion for some six or eight weeks in order to allow the fibrous union to become as firm as possible. Patients treated in that way get a very good limb but it takes a long time He has not yet had an unsuccessful wiring, nor a case of sepsis He appreciates, however, the danger of which Dr Powers speaks Dr Cabot tells his house surgeons that he wants them to take more pains in disinfecting a knee than in disinfecting the abdomen for laparotomy because the danger of infection is greater The absorption from the knee joint is not nearly so good as from the peritoneum and sepsis in the knee joint is more likely to occur than in the peritoneum By taking excessive care the very great majority of wiring of knees can be done with perfect success He has not yet had his unlucky case

Dr F D Gray Jersey City, has had an experience within the last year which leads him to make some exception regarding the advisability of attempting late suture The patient a woman, had been operated on successfully for fracture of the patella about ten months before Dr Gray first saw her The operation had been performed very carefully by the surgeon in charge of the case and the result was a good one The patient left the hospital at the end of four or five weeks While under subsequent care of her family physician a fracture took place either through the carelessness of the physician or of the patient Nothing was done to correct the trouble After nine months the patient consulted Dr Gray with a separation of the fragments of about two and a half inches He told her that he would not promise anything in the way of results but that inasmuch as her condition was so bad he would do what he could by performing a secondary operation He succeeded better than he expected in bringing the fragments together The upper fragment was softened somewhat He introduced two wire sutures, but one tore a little He sutured the adjoining fibrous tissue with catgut and then put on a plaster splint which he kept on for two months During the next four months gradual mobilization of the joint was effected and to-day the patient walks with barely a limp She can flex the knee to a right angle with the thigh and she can raise the foot from four to six inches from the floor while sitting The quadriceps extensor of course is still considerably atrophied

Dr. J Ransohoff said that he wished to emphasize the desirability of taking as many *x* ray pictures as possible in every case of hemarthrosis in order to see whether the experimental findings which he reported can be confirmed by practical clinical experience

THE OPEN-AIR TREATMENT OF PNEUMONIA *

W P NORTHRUP, M.D
NEW YORK CITY

For more than eleven years I have been treating pneumonia patients in cool fresh air, gradually placing their beds nearer and nearer the open window Last winter I put them out on the roof It is not always practicable to make use of a roof, but what I have to say about the beneficial effects of open-air treatment is founded mainly on last year's experience at the Presbyterian Hospital, New York City It comprises experience in all months of the winter

Our systematic practice was to put all pneumonia patients during the day, for six hours, on the roof, in the open air, in all weather in which harsh high winds, rain and snow did not prohibit Indeed, the patients were not always brought in for little sprinkling rains or trivial snowfalls, and many times were out when high snow banks formed a corral about the space in which the beds were grouped A permanent wind-break formed by the sun room on the west and a built-up screen on the north protected them somewhat Much of the time, however, the wind was in the south, and more often in the east In this case a very inefficient canvass awning partially screened the patients, until one night in December high winds wrecked the canvas

The practice of placing severely sick pneumonia patients in the open air in midwinter was not adopted without much observation and some self-education Gradually, after most careful precautions and constant watching, it became the firm conviction of all observers that such patients were decidedly benefited thereby At last it was decided on as a routine treatment

No one is convinced by others' experience or by statistics I am not going into figures, for the cases are too limited in number I am not going to convince any one that they should adopt the routine treatment I am only attempting to get some few to try it for themselves If it seems to them to give a very sick patient the best chance for life, the method will survive criticism and be adopted If it does not, it will deservedly fail

Primary pneumonia in previously healthy infants and young children allows of good prognosis in over 90 per cent of cases under any and all treatment Even the worst treatment seldom kills them They can survive constricting poultices, hot unventilated rooms, and coal tar antipyretics It is the remaining percentage which we wish to save We wish to support the patient in the fight, to give the blood, the organs and the body cells every aid in our power to counteract the deleterious effects of the infecting agent I would not underestimate drugs I would only magnify the therapeutic value of hygienic measures, especially water and fresh air I would say that the two most important aids are plenty of water inside and outside and fresh air everywhere The latter, as the title indicates, is the therapeutic agent here under discussion

CASE SUMMARIES

By way of illustrating, a few cases will be briefly outlined In these cases, which everyone present will probably admit were serious cases, the body cells would seem to have been materially aided by open-air (on the roof) treatment

CASE 1—A little girl, aged 3, came into the Presbyterian Hospital with frank lobar pneumonia One large lower lobe was solid.

From examining the mouth the house physician suspected the possibility of developing measles For this reason the child was moved temporarily into a small room adjoining the ward, and a screen bent around the bed. I happened in shortly after and found the child climbing about the crib, whining and worrying The fever was high, the face dusky, the child evidently delirious

On the arrival of the house physician he was amazed at the change in the child While in the ward, where the air was fairly fresh and cool, the child was quiet and sleeping It seemed that simply putting it into the small room behind the screen (and the air was not particularly warm or stale), had developed this duskiness and delirium The child proved not to be developing measles, and was sent at once to join the others on the roof It was wheeled to the elevator and thence into the open air Shortly after its arrival there the mother came to pay it a visit We may well imagine her state of mind, knowing our diagnosis She was making known her feelings on the subject when I arrived for my second observation on the child during the same morning The mother was standing beside the crib, scantily wrapped, and was nearly frozen The crib was exposed to the full flood of east wind, though it was not 20 feet to carry the crib to place it behind an angle of the sun room I said to the mother in an interval between her remarks "How does the child seem to you?" This took her unawares, and she ended by admitting that though she herself was rapidly chilling and beginning to shiver, the child semed much better It had fallen into a quiet sleep, its color was normal, its face wore a tranquil look such as it had not before shown The mother and I parted friends, and we are still such

This case is mentioned in detail to show how even the mother approved when once she saw the demonstration of the favorable effects The child might possibly have recovered under any treatment, but the quieting effect of the December open air was most favorably shown

A second case was one in which there is doubt whether the patient would have recovered if treated continuously in the ward

CASE 2—A boy, aged 6, after operation for foreign body in the esophagus, developed double septic bronchopneumonia and recovered. The foreign body had been in the esophagus 13 days, had rendered feeding for that time almost impossible, one half to one pint of milk a day being all the food that he could pass into his stomach He was under observation for another week, in which time *x* ray photographs were taken At the operation the surgeon remarked that in most cases of late operation on the esophagus, whether the wound be closed or left open, the patients develop sepsis and die

In this case there were extensive sloughs, the wound was left open, feeding without vomiting was fairly successful. For four weeks then the nourishment had been very imperfect, and the child was much reduced. At this juncture the temperature mounted and double bronchopneumonia developed. The child appeared to be in a most critical condition, its color was metallic and sallow, it sank in relaxation deep down in the bed, its respirations were rapid and shallow It seldom opened its eyes

The surgeon asked me whether I would recommend that this patient go on the roof Thus far it seemed too much of a journey for so prostrated a child, and it had remained in the ward Our judgment was that whatever was done for the child, it would not live three days The house surgeon took the matter in his own hands, superintending the transportation, and put the patient on the roof for six hours a day I heard the patient had not died, but forgot about it later

On a chance visit to the surgical cases, the nurse, in a most cheerful voice asked me if I was coming to the birthday party I said of course I was, but asked whose party it was "Theodore's party," she replied After explanation I realized that the boy who had had double septic bronchopneumonia, who had been operated on for foreign body of the esophagus, was celebrating his birthday with the other convalescents The cake bore six candles

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* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty seventh Annual Session June 1906

Truly, I do not believe this patient would have recovered under old ward conditions and constant rest in the same air and environment I could cite a few more cases in which the determining factor toward recovery was the cold, bracing, open winter air on the roof

As I said at the outset, I expect no one to be convinced by this paper I only hope some will be induced to try the treatment Begin with a case so bad you believe it has no chance for life, one that is delirious, husky, restless, gasping for breath, respirations shallow and rapid, temperature high, the poisoning so profound that delirium alternates with that dull, sodden mental state so well named "dopey" I only ask you to observe whether or not every superficial symptom is improved by it Note, first of all, whether patients are quieted, are of better color, take their food better, have cleaner tongues, better assimilation If they show no improvement when entirely surrounded with cold streaming fresh air, then I have nothing to say Do not take another's word for it, try it

SUMMARY

1 The cases most favorably affected by open-air treatment are those with severe poisoning, with delirium, partial cyanosis or deep stupor ("dopey") In my experience all cases fare better in cool fresh air Open air may be secured by screening off the bed and a portion of the room next the window

2 In my experience no cases of pneumonia have been injured, and a few have been much aided, possibly saved, by the cold fresh air treatment

3 If pneumonia, due to an infecting agent, is benefited by the treatment, one may be easily led to try it for other infectious diseases As a matter of fact, I have tried it for many others, including typhoid with severe bronchitis, whooping cough with bronchitis and convulsions, with excellent results It seems to me the ideal treatment for all forms of "septic fever"

4 The only regulaton is to make the patients comfortable, keeping their feet warm especially The ears, nose and hands may get cold without harm

Finally, the Presbyterian Hospital is so convinced of the permanent usefulness of open-air treatment for all infectious fevers that it has built a roof garden for the children's ward and is about to build on the main roof of the medical side of the hospital a colossal roof garden One-half of this has a "horse shed" structure, the shed open to the south, and a liberal space in front is enclosed, like a paddock, for a roof garden In bad weather the beds of the fever patients are to be wheeled back into the depths of the shed In good weather they will be advanced more and more to the opening or even out into the garden They will remain there, night and day, so long as their fever is high It is to be an open-air ward

DISCUSSION

Dr John Lovett Morse, Boston said he claimed to be a humble disciple of Dr Northrup in the matter of fresh air In the last two years he had been treating all his pneumonia patients both in private and hospital practice, with the windows wide open without regard to the temperature of the air outside As far as possible he kept them by the window In no case had he seen any harm done and in many cases there was a great deal of benefit He had not been able at any rate in hospital practice, to get the percentage of recoveries from pneumonia which Dr Northrup gave

Dr Isaac A Abt Chicago, said he did not exactly agree with Dr Northrup's view, but he believed that Dr Northrup's position in regard to the treatment of pneumonia among children will bear valuable fruit It will awaken the entire profession to the importance of securing fresh air and well ventilated rooms for the little patients ill with pneumonia Dr Abt would hesitate to expose pneumonia patients to the extreme cold of the winter until further proof is brought forth So little is known about the physiology of the heat regulating apparatus of the infant It has been taught that premature and delicate infants can only survive if they are kept warm Surgeons declare that children stand operations much better if the operating table is kept warm Now, it is proposed, to go to the other extreme and treat our pneumonia patients out of doors in the extreme cold weather It will require a larger experience, careful clinical study of the cases thus treated and some physiologic observations before this plan of treatment should be commended for universal adoption

Dr. Edwin E Graham, Philadelphia, narrated his experience with this treatment during the first three months of this year in Philadelphia He went on duty in the Children's Hospital and in the Philadelphia Hospital and found possibly forty or fifty children under the age of one year Nearly all were foundlings and most of them were feeding The treatment of these cases in his hands was most unsatisfactory He first started three years ago to put them on the fire escapes The cribs would be more or less covered with towels and the babies bundled in blankets and it did them good Two years ago he dispensed with the towels over the cribs simply rolling them in the blankets This year he obtained the coöperation of the resident physicians and nurses, and from almost the very first day these children, bundled up in blankets as if they were bags of meal with nothing but their heads outside, and these covered with very warm caps, were taken out to the porch, which was covered with glass and open at the front and sides The results have been surprising Those cases which had been almost worrying the life out of the resident physician and giving him much anxiety during previous years almost invariably began to improve The records cover a great many children, some of them only for a period of a few weeks and others for a period of three months Unless the children were ill with some condition like tuberculosis in which improvement was almost impossible they stopped losing weight and gradually gained The results of these three months have convinced him that even in hospital work where formerly he was not able to get satisfactory results these results have been quite possible

Dr C F Wahrer, Fort Madison Iowa, said that less than ten years ago it was advised to treat pneumonia cases by opening all the windows and letting the cold air blow on them None of the men who have advocated this treatment have given the rationale of their procedure Dr Northrup says "Try it." This is somewhat in the nature of empiricism In view of the fact that we all consider pneumonia an entirely infectious disease, Dr Wahrer would like to know what is the *modus operandi* on the bacillus of pneumonia Dr Northrup's method is the very opposite of the popular method so long followed by the profession namely to keep the patient warm, use of warm poultices affusions and other warm and even hot applications still recommended by many of our most recent text books On the whole it is rather a sad comment on the treatment of pneumonia to flounder from some of the most active opposite methods to the most nihilistic *laissez faire* or the let the patient get well system

Dr. W C Brewer, Columbus, Miss, approved of Dr Northrup's paper, having treated a number of cases of pneumonia by the open air method and finds it gives excellent results In the last five years he had not kept as careful statistics as he might but he believes the treatment is a good one for pneumonia The worst thing in pneumonia especially in children is over medication, the best thing is plenty of fresh air

Dr Abt seems to think that there is some great difference in the temperature of the air Dr Brewer thinks that the temperature of the air is of great consequ

sired in these cases is oxygen In his [illegible] neys seemed to do their work with less strain or effort, depression after the crisis was not so marked, and the recovery was more rapid

Dr. F S Churchill, Chicago, said he did not see how any one who has ever tried the method can doubt its value, he having treated pneumonia in this way for several years A patient is well exposed to the fresh air and the effect is very refreshing and beneficial If any one would but give it a trial for a few of his cases he would continue to use it and expose his patients to plenty of good fresh air

Dr. H. McClanahan, Omaha, Neb, said that the paper will be of great and decided benefit to all of us in giving us more courage in insisting on thorough ventilation of our patients' rooms He had always been confronted with that fear of mothers that fresh air might be injurious to a sick child For a number of years he adopted the treatment in pneumonia of having two rooms, if necessary utilizing the dining room to secure entire change of air, and he has so taught his classes He would like to know how Dr Northrup keeps his patients warm with the temperature approaching zero and what instructions he gives the nurse about observing the body temperature In view of Dr Northrup's statement that the hands and ears might become cold, Dr McClanahan wondered whether driving of the blood from the large surface capillaries might not be injurious He would like to know more definitely of the technic of the method

Dr George N Acker, Washington, D C, said that one point overlooked was in reference to the advisability of leaving off the pneumonia jackets, which he thinks do more harm than good He believes also that too much medicine is given in pneumonia Strychnia at the end of the disease is indicated

Dr. D E English, Mill Burn, N J asked Dr Northrup whether he gets good nursing under these low temperatures, whether he can get nurses to give proper care to the children when they are cold themselves

Dr H. C Worthington, Oak Park, Ill, said he had saved several lives by the treatment and with profound gratitude that he accepted Dr Northrup's views

Dr R B Gilbert, Louisville, Ky, asked Dr Northrup whether he gives any other treatment Is nothing else done [illegible]cept to put the patients out of doors? Dr Gilbert believes [illegible] the oxygen treatment.

Dr B B Simms, Talladega Ala, said he believed in the treatment Last winter he had a child two years of age with bronchopneumonia in which the crisis appeared in about five days The child did not improve after the crisis and seemed to have some chronic trouble, but not tuberculosis It went home but did not improve After awhile he felt satisfied that it would die if the mother did not allow him to put it out on the porch Consent was given and improvement was noticed in the first twenty four hours Some six years ago he noticed Dr Seibert treating cases of pneumonia in children in a carriage out on the sidewalk

Dr. W P Northrup New York City said that by explaining the treatment its acceptance is made possible. He makes but limited use of drugs in pneumonia, not having much use for them since he adopted this treatment. In regard to nursing, he insists that the baby's feet must be kept warm Very great care is to be taken of the digestive tract in order to prevent flatus which would make breathing difficult. He can not explain how the treatment gives the good results The cold fresh air acts in a certain beneficial way Some say it is oxygen and not the cold. But the cold is important, the colder the day, the better the patients do It does something toward quieting them A German physician has adopted this plan and has published his views that are quite in accord with those of Dr Northrup and quite as radical The plan is not anybody's method, it is a hygienic method He does not think it is quite the element of oxygen alone that does the good, there is something about the coldness and freshness of the air that braces people up In the spring, a little change in the temperature and moisture causes people to say they have the "Spring fever," the wind changes and they are all braced up About the traditions too much had better not be said, for some have been pretty bad A child entirely outdoors is absolutely safe Dr Northrup has never known one threatening thing to happen to such a child, well wrapped up They should be made comfortable and hot water bottles, if necessary, put to their feet If the air comes only on the face it is not so favorable but if the child is wholly bathed in the cold air there is no danger He could give many instances of benefit In one child with a temperature of 106, and dopey, improvement promptly followed removal to the air From the outdoor treatment of tuberculosis it has been learned that infectious fevers with temperature should have the benefit of the open air If the time is ripe to try the plan, try it Do not call it anybody's method Fresh air was not discovered to day, yesterday or the day before The method is radical, but it works

ACUTE NON-SUPPURATIVE ENCEPHALITIS IN CHILDREN *

ISAAC A ABT, M D

CHICAGO

Acute non-suppurative *encephalitis is neither a rare* nor new disease among children Striking cases, however, are of interest Attention was first called to this class of cases by Strumpell[1] in 1884

> Cerebral palsies in children depend on inflammation of the gray substance of the motor cortex There is, therefore, an acute polioencephalitis analogous to acute poliomyelitis Both depend on the same infection which sometimes becomes localized in the brain, sometimes in the cord.

Strumpell's publication aroused much interest and subsequent investigations were made by Bernhardt, Wollenberg, Krast and Mobius in Germany, Marie in France, Ross, Abercrombie, Gowers and Ashby in England, Sachs, Peterson and Osler in the United States

With the evolution of the subject, it became evident that Strumpell was not entirely correct in the assumption that cerebral palsy in children was due to a single process, but several pathologic changes, such as cerebral hemorrhage, embolism, and thrombosis, with sclerosis cyst formation or porencephaly Hence polioencephalitis was responsible for the cerebral palsies in only a proportion of the cases Sachs states that the disease, polioencephalitis, is open to question He doubts the existence of such a morbid entity During the last few years, however, many contributions have been made to the subject and there remains no doubt that Strumpell's position was essentially correct, that acute encephalitis is responsible for a proportion of the cases of hemiplegia in young life, Freud[2] *estimates that one-third of all the* cases of hemiplegia in children are infectious in origin

In looking over a large number of histories of this disease one cannot fail to be impressed with the fact that it has several clinical types Batten[3] believes that acute poliomyelitis and encephalitis are often associated and suggests as a classification 1 Acute polioencephalitis superior, including those cases of paralysis in which the frontal, motor and occipital regions of the cortex are affected 2 Acute polioencephalitis inferior, in which the neuclei of the cranial nerves are involved 3 Acute poliomyelitis anterior, in which the gray matter of the anterior horns below the medulla is affected It is thought that the cord and the brain may be affected at the same time, thus constituting a polioencephalomyelitis Aldrich[4] says that there is occasionally a disseminated encephalomyelitis complicating smallpox

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* Read in the Section on Diseases of Children of the American Medical Association at the Fifty seventh Annual Session, June 1906

[1] Strümpell *Lehrbuch für Speciellen Pathologies und Therapie*" 1893

[2] Freud Infantile Cerebrale Lähmungen 1897

[3] Batten The Lancet, Dec. 20, 1902

Two cases constitute the subject of this clinical report

CASE 1—E V, female child, aged 5, came under my observation July 31, 1905 She was born under normal circumstances, was breast fed, progressed favorably during her infancy and never had any severe illness

Present Illness—The mother had taken the family away for a visit in Ohio On July 25 the child fell ill with a severe headache The mother thought the child was feverish The pain in the head, which at first was slight, became more and more severe During the first night of the illness the mother was of the opinion that the headache was intense The child cried piteously, the mother carried her in her arms all night in an endeavor to quiet her On the following day there was less restlessness and she did not speak to those around her During the night of the second day, the mother states that the child's head was thrown back and the arms were stiffened at frequent intervals It was noticed that these rigidities of the neck and extremities seemed painful to the child On the next day, Thursday, she became still more quiet, although there were paroxysms of pain during which she cried out loud The father, who had come to take charge of her, was alarmed by the condition and concluded to bring her to Chicago, arriving July 31 The child was at once taken to the hospital

Examination—The child was semi conscious, too stuporous to speak or take notice of anything Temperature was 102 6, pulse, 138, respirations, 30 Examination of the skull and scalp was negative The pupils were equal and reacted both to light and distance, there was no paresis of the lids a slight nystagmus, but no strabismus, was noted The mouth and pharynx were negative There was slight facial asymmetry due to paresis of the right side The examination of the heart and lungs proved negative The muscles of the upper extremities were tense and somewhat retracted. Palpation of the abdomen elicited some rigidity of the muscles, with a slight retraction of the abdominal wall. The tendon reflexes were all increased, yet more markedly on the right side The Babinski toe sign was present, also more markedly on the right side The Kernig sign was not present The child was having involuntary evacuations from the bowel and bladder The examination of the urine was negative. Blood examination showed a moderate leucocytosis

Clinical History—There was not much change in her condition for a number of days after her admission into the hospital At times, particularly at night, she was slightly restless, though for the most part she lay in a stupor She took a moderate amount of food There were occasional twitchings in the right arm and leg, though voluntary movements were not noted. The pulse was sometimes irregular The temperature varied from 99 in the morning to 103 in the evening and followed no regular type After she had been in the hospital about a week the temperature showed a tendency to fall, and on the ninth day was practically normal At this time she began to cry out, but did not appear brighter

On August 14 (twentieth day), however, she seemed to recognize her baby brother On August 18 (twenty fourth day) her mind was clearer and she took considerable food She cried out at times, seemed to recognize those who entered the room, but did not speak On August 19 (twenty fifth day) for the first time she moved her left leg but neither her head nor hands She recognized her mother by signs, but did not speak On August 22 (twenty eighth day) she gave evidence of general improvement She smiled and nodded to those who came into her room Her pulse was slow, but of good quality On August 23 (twenty ninth day) movement was noted in her left foot and leg She seemed greatly pleased about this and laughed out loud

Recent History—On August 26 (thirty first day) she was removed from the hospital to her home She seemed very happy, moved her left arm and leg relished her food, but was still unable to speak On August 31 (thirty sixth day) for the first time movement appeared in the fingers of her right hand During this interval she used her left arm and leg with ease, participated somewhat with her brother and sister in their play, and they endeavored to teach her the deaf and dumb language, in which they partly succeeded She enjoyed this idea and made finger signs in return, thereby indicating her wants The mother states that on September 5 (forty first day) she tried to talk but describes the attempt made as pitiful A few days later she ventured the remark, "Take me" It was a very great effort Improvement was slow The use of her left arm and leg returned only after a protracted time The paresis of the right side of the face improved only slightly

Her speech improved gradually, though even now she talks with some difficulty She hesitates and stammers, and her speaking vocabulary is not large The upper extremity of the right side is used with some difficulty There is some contracture in the hands and fingers The elbow joints are movable She is awkward in the use of the arm and hand The patellar reflex of the right side is more active than the left Ankle clonus is present There is no considerable atrophy of the right leg or arm, the foot hangs in equino varus position, the gait is decidedly of a hemiplegic type She is irritable and extremely shy in the presence of strangers Sensation everywhere is normal

The points in this case may be summed up briefly as follows A previously healthy child was taken suddenly ill with headache, fever and increasing unconsciousness, a condition which continued for about ten days, when she awoke from the stupor and was found to be suffering from a generalized paralysis The use of the left side recovered itself in a few days She was and is now suffering from a complete right-sided hemiplegia Her intelligence does not seem to have suffered to any marked degree As I saw the child on the first day, it impressed me much as would a case of tuberculous meningitis, and I am free to confess that this impression was retained throughout the first days of the illness Respecting the wishes of the father, I did not make a lumbar puncture It was only when the child aroused somewhat from the stupor that we began to suspect the true nature of the disease, which suspicion grew to a conviction with the appearance of the hemiplegia

CASE 2—Male child, aged 6, was without serious illness until the present attack

Family History—The maternal grandfather died at the age of 66 years from heat prostration The maternal grandmother met with an accidental death at the age of 31 The paternal grandparents lived to be very old The little patient's father lost two sisters from tuberculosis The father himself has always been well In appearance the mother is a very large, robust woman She says she never had any serious illness, although all her life she lacked in endurance

Present Illness—The boy became ill on the first day of September, 1905 At the dinner table he did not seem himself He appeared exhausted his face became pale he was listless and had to be carried to bed Although this was unusual, nevertheless the mother attributed it to hard play The next morning he vomited several times but did not create the impression of being seriously ill The pulse was 120 and the temperature 101 F He was drowsy though he could be readily aroused The mother thought he did not act differently from any child suffering from fever On this day the parents were invited to a friend's farm in the country Notwithstanding the little fellow's indisposition they took him along He continued to be drowsy refused food for the most part and vomited occasionally This was the third day of his illness In the evening the boy did not seem any better and the parents returned with him to the city He acted excessively nervous was very irritable and fretful and it was noticed by the mother that the left side of the face was slightly drawn and a slight tremor appeared in th [illegible] His condition was not considered worse [illegible] since he slept nearly all night. On Monday at 5 o'clock p. m. he seemed decidedly worse. His temperature was 104, his pulse very rapid. He lay in bed in dorsal position, unconscious, though he gave an occasional cry. There were involuntary passages from the bowels and the bladder.

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[4] C T Aldrich Am Jour Med. Sciences February 1904

Examination.—I saw him for the first time on the fourth day of his illness, and noted a well developed, well nourished boy in a state of unconsciousness and with considerable fever, varying from 102 to 104. The examination of the head and scalp was negative. Inspection of the ears by a specialist showed them to be normal. The pupils were regular, reacted readily to light and accommodation. The examination of the eye grounds proved negative. The left half of the face was drawn slightly. The tendon reflexes of the arm and leg on the right side were somewhat more brisk than those on the left. The urine was excessively acid and showed slight traces of albumin.

Clinical History.—On Tuesday (the fifth day) he was unable to speak, but was stuporous. He vomited occasionally and threw himself about. At this time it was observed that he had a paresis on the left side of the face, and it was suspected that the right arm and leg were paralyzed. He lay in this condition of stupor until Thursday (the seventh day), when he awakened for an hour. On Friday he became brighter, taking notice of some figures on the bedspread and calling attention to them. From this day on he was without fever. His recovery was gradual. He shortly regained his speech, and in three weeks more was able to walk. The mother called attention to the fact that although improved and up and about, he nevertheless remained extremely nervous. He became greatly excited in the presence of a company of people or when taken downtown among large crowds. The slightest physical effort seemed to prostrate him.

Present Condition.—There is now a very evident paralysis of the left half of the face. If he smiles or attempts to whistle, or even to speak, left facial paresis is unmistakable. The hand and arm on the right side have recovered to a very considerable degree. There is a slight flexion of the fingers, though he uses his hand with great facility. There is some limp when he walks, though there seems to be very little spasticity of the right leg. He sometimes complains of a pain in the right foot and hand, probably the so called post hemiplegic pain. He is a bright little fellow, quick and nervous in his actions, talks about almost every subject in a very intelligent way. He makes the impression of being mentally normal.

This case presented difficulties in diagnosis, such as confront one in the incipient stages of this disease. During the first forty-eight hours, one would have thought of some acute infectious process, for example, an obscure pneumonia or almost any infectious disease in process of development. The case is of additional interest in that it shows the lesion located in the pons, and belonging to that variety already spoken of as polioencephalitis inferior.

ETIOLOGY

The cause of acute non-suppurative encephalitis may be summed up briefly in the words infection and intoxication. Acute alcoholism possibly plays a rôle in adults and older children. In one of Wernicke's cases, poisoning with sulphuric acid was suspected. In other cases, nicotine has been thought of as a factor. The infective source is the most frequent of all in the encephalitis of children. It is well known that an encephalitis may develop during the course of a cerebro-spinal meningitis. In nearly a third of all the cases of hemiplegia in young life it has followed one of the acute infectious diseases, occuring either at the height, or defervesence of the disease.[2] There is probably no infectious disease known which has not been reported at one time or another as having been followed by cerebral hemiplegia.

Measles and scarlet fever, according to Freud,[2] head the list. Next in order come smallpox, German measles, whooping-cough, diphtheria, croup, follicular tonsillitis, morbus maculosis, dysentery, pneumonia, typhoid fever, mumps, intermittent fever, chorea with endocarditis, even vaccination is said to have caused hemiplegia in several cases. Perhaps the best known and the best studied of all the various infections producing encephalitis is influenza. The question is not altogether settled whether the influenza bacillus itself or its toxin produces the cerebral inflammation.

Pfuhl[5] succeeded in finding influenza bacilli in the central nervous system of patients dying of a severe nervous form of influenza. Nauwerck[6] succeeded in finding the Pfeiffer bacillus in a case of influenzal encephalitis in the brain and in the ventricles. Cantani[7] has injected cultures of influenza bacillus beneath the dura of rabbits, and succeeded in producing meningitis and encephalitis. He found, too, that the same result could be produced by the injection of dead cultures as well as living cultures. The inference, therefore, is, that encephalitis is due to the action of a toxin produced by the bacilli on the brain substance. There is a large number of cases in which encephalitis occurs as a primary infection. In the two cases which I have cited, evidence of any pre-existing infectious disease is absolutely lacking.

All authors mention trauma, such as a blow on the head or a fall, as having some direct remote relation to disease. Heubner[8] finds that it is much more frequent during the first and third years of life, though it does occur at almost any age during childhood. In some of the cases, syphilis is a predisposing, if not an exciting cause, by giving rise to an endarteritis, or some other lesion of syphilitic degeneration, which might become secondarily infected. An ulcerative endocarditis may cause an embolic process infectious in character.

PATHOLOGIC ANATOMY AND HISTOLOGY

Any portion of the brain may be infected, though, as it has already been stated the cortex, or encephalitis superior (Strumpell's variety), the basal ganglia and the region of the medulla, or encephalitis inferior (Wernicke's variety) are selected areas. The cerebellum is seldom affected, although Batten[8] recently reports a case typical in its clinical findings and verified by autopsy. The disease is usually focal in character, though the foci are multiple and disseminated. The most striking point in examining an area of inflammation is the change of color apparent in the gray substance. It is grayish-red or violet or brownish-red, or the white substance is streaked with red. Sometimes there is a uniform discoloration, or the brain substance appears streaked or spotted. On section of the brain red or yellow points may be seen which have been compared to flea bites by older authors and described as being surrounded by zones of swelling and softening. When the lesion is in the cortex, the neighboring pia is usually injected and may be adherent.

The results of acute encephalitis may terminate in local necrosis or formation of scar tissue. Glia cells are proliferated and connective tissue is formed. This results in a local induration, referred to by the older writers as brain sclerosis. The process may be very extensive and lead to atrophy of a part or even an entire cerebral hemisphere. In other organs, lesions are sometimes found as the result of the general infection The spleen is at times enlarged, hemorrhages occur into intestines and mesentery, while a parenchymatous degeneration of myocardium and acute nephritis may be present

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[5] Pfuhl: Deutsch. med. Wochschr., No. 6, 1896; also Deutsch. med. Wochschr., No. 29, 1895; Berlin. klin. Wochschr., No. 39, 1892.

[6] Nauwerck: Deutsch. med. Wochschr., No. 25, 1895.

[7] Cantani.

[8] Heubner: Kinderheilkunde, 1900.

SYMPTOMATOLOGY

Strumpell[1] speaks of acute encephalitis as occurring in children between 1 and 4 The disease is marked by sudden onset, with feeling of illness and fever Shortly nausea and vomiting or general cerebral disturbance in the form of coma and convulsions may occur This condition may last one or two days or one to three weeks The children may recover from the disease gradually, but paralysis in some form will remain

After the paralysis has existed a while, examination usually shows that both extremities of one side are affected, the arm more than the leg There are no sensory disturbances The growth is, to a certain extent, retarded The muscles are somewhat atrophied There is no reaction of degeneration, but almost always more or less muscular contraction Variations from this course sometimes occur Children occasionally die suddenly before the diagnosis can be positively made Chronic forms sometimes occur In these cases the initial symptoms may last one or two months Convulsions occur frequently, resulting from the new inflammatory areas Strumpell[1] believes this disease is analogous to acute poliomyelitis, the initial symptoms are so similar that in a given case it might be difficult to decide whether a cerebral or spinal paralysis would ensue In another group of cases, which belongs more particularly to the inferior polioencephalitis group, the acute infectious diseases very often precede the onset of the encephalitis One of Leyden's cases of this type is of interest

A 16 year old boy fell suddenly ill with headache, nausea and dizziness, and on the third day these symptoms were augmented by fever, vomiting, difficulty in swallowing, the symptoms progressed, and on the sixth day of his illness, in addition to the headache and dizziness, he developed rigidity of the neck, ataxia, paralysis of both facial nerves, paralysis of the hypoglossal, of the soft palate and vocal cords He also had a mild fever His pulse was slow, there was no involvement of the eye muscles at first, later on he showed paralysis of the abducens He died on the eleventh day of his sickness, and the autopsy showed a pneumonia with an encephalitis in the region of the medulla

Oppenheim[9] reported another case of encephalitis located in the pons

A girl, aged 12, suffered from a swollen face, with pain on the left side She also suffered from headache Very soon she became mentally dull. There was no fever, there were no changes in the eye grounds Some time later, however, the left facial nerve became entirely paralyzed, with a hemiparesis and incoördination of both arms, though most marked in the left arm The tendon reflexes became increased, the soft palate was paretic, articulation was difficult All of these symptoms pointed to a focal lesion involving the pons in the region of the left facial nerve, and extending so as to involve the sensory and left pyramidal tracts

In the majority of cases, the disease begins in the midst of perfect health, like an acute infection, and in the manner already referred to Convulsions may occur, of the Jacksonian type, or may be general The vomiting may be persistent and the child remain in a febrile, stuporous or comatose condition for several days The temperature is variable, the coma rarely complete At first sight, one is inclined to think of meningitis or perhaps some other acute infectious disease which is in process of development, with decided nervous symptoms, but in a few days the fever declines, the child becomes more quiet, and thus, on the fourth or fifth or perhaps the tenth day of the disease, the paralysis becomes evident There may be an arm involved, a complete hemiplegia, or a crossed paralysis due to a lesion in the pons, as has already been referred to

At the very onset the reflexes may be diminished, and a generalized paralysis of all of the extremities seems to be present In several days, however, the unaffected extremities begin to regain their motor function, and later on the child begins to move to some extent the affected arm or leg At this time the reflexes on the involved side are usually increased, and the Babinski toe sign becomes manifest

In addition to the nervous symptoms already enumerated, symptoms indicating vasomotor disturbances are not infrequent, for example, the nutrition of the skin is affected It is likely to appear blue on account of capillary and venous stasis in the hand and foot of the affected side Such an extremity is cyanotic, sometimes slightly edematous, and not infrequently cooler than the limb of the other side The skin is dry the sweat glands less active on the unaffected side Very often, and particularly in the milder cases, the intellect of the child remains practically unimpaired At other times where the lesion is extensive, more or less permanent mental deficiency supervenes even to the production of idiocy Such a disturbance of motor speech may persist in varying degree In many cases epileptic convulsions develop from which recovery is impossible

Schultze[3] first called attention to the fact that deaf-mutism may result from acute encephalitis He cites the following case

A 2½ year old child, healthy, received a blow on the head The same evening it cried for several hours, and on the following night had convulsions with slight fever For two days thereafter it was stupid, restless and refused food On the fourth day it showed some improvement Ten days after the beginning of the disease it was found that the child was deaf; also that it had slight strabismus, no other paralysis existed The deafness continued although the middle ear was normal

In some of the milder cases the paralytic symptoms may entirely disappear, and Medin reports a recovery without permanent paralysis Comby also reports a case in a 7-year-old girl cured without a trace of paralysis

Complete recoveries have been reported after slight attacks, usually slight paralysis remaining The terminal of the cases may be summarized thus

1 A small proportion of the cases do not survive, death occurring in the second or third week or as early as the first day

2 If the encephalitis occurs during acute infectious disease, death may result from cerebral conditions or from the original disease.

3 Some cases improve within a few days, without any signs of disease after six or eight weeks There is always a liability to hemiparesis of one side of the body or to epilepsy

4 The majority of cases with initial flaccidity give rise later to the spastic type of hemiplegia

The diagnosis during the acute stage is nearly always difficult One is liable to think of an acute infectious disease, on the one hand or a men [illegible] other The diagnosis may be confused [illegible] lous meningitis Spinal puncture in these cases is of but little assistance If hemiplegia exists or cranial nerve paralysis, with returning consciousness, the diagnosis is rendered comparatively easy

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[9] Oppenheim Enceph Specielle Pathologie und Therapie Nothnagel 1897

In short, if in the midst of absolute health, or in connection with an acute febrile disease, the child during the first years of life is seized with recurring convulsions, or vomiting, if a hemiplegia results, or if, later, psychic disturbances contractures, postparalytic hemichorea, epilepsy or idiocy develop, the diagnosis of encephalitis can be made with reasonable certainty

DISCUSSION

Dr J Ross Snyder, Birmingham, Ala, said that he was much impressed with the closeness of Dr Abt's clinical observations in the cases of acute encephalitis presented because the differentiation of the disease depends more on the closer findings than on the large and glaring symptoms

Dr William J Butler, Chicago, said that few subjects in pediatrics admit of more speculation as to their etiology than the acute cerebral palsies of early childhood This is chiefly due to the fact that these patients seldom die in the acute stage As a consequence pathologic information is rather scant and the cases usually come to postmortem months or years after the actual disease when secondary changes have occurred which render a determination of the primary condition impossible. This has given rise to the hypothesis which, he believed, was originated by Benedict, and reviewed by Strümpell (who employed the term polioencephalitis), of acute encephalitis, being responsible for a large number of the spastic hemiplegias of childhood The acute cases that have come to postmortem early are usually dependent on vascular changes, whether it is a thrombus, embolism or hemorrhage. In the ist number that fail to come to postmortem the assumption an encephalitis frequently prevails In recent years some ises at postmortem have disclosed changes of an encephalitis milar to those which occur in the adult as described by ppenheim and others The cases are interesting from more ian one standpoint, for instance, Strümpell first spoke of the nset of encephalitis as being characterized by convulsions and oma These were not present in one of the cases mentioned y Dr Abt These views have been modified also by Strümpell o cover such cases, that is, the onset may be gradual and con ulsions may not play a part in the clinical picture. Dr Abt's rst case is of interest, because of the meningeal symptoms resent and because of the generalized spasticity that existed nd which leaves one in doubt as to whether the process did ot extend beyond the brain as might occur in an isolated case of cerebrospinal meningitis in which there is often a cerebritis as well as a meningitis

Dr. George N Acker, Washington, said that the condition at times is very hard to diagnose, and recalled a case during an epidemic of grippe in which the child had bronchitis and was in a state of coma in which it remained five days The muscles of the neck were rigid and all four extremities were paralyzed The diagnosis was poliomyelitis anterior with acute encephalitis He has seen these cases in influenza and it is only occasionally that they recover without lesion He has also seen cases of hemiplegia with typhoid fever with perfect recovery It is very difficult to make a diagnosis in the first stages

Dr. J H W Rhein, Philadelphia, said that in the last two years he had had an opportunity to study microscopically the brains in several cases of encephalitis one of which was acute In a case of scarlet fever which displayed very few meningeal symptoms clinically the brain showed microscopically undoubted, though not marked evidence of encephalitis There were a few hemorrhages in the pia which was also the seat of a slight round cell infiltration In the cortex there was some perivascular dilation as well In a second case an infant developed during the course of whooping cough gradual weakness of the legs and arms associated with progressive spasticity Finally the child became idiotic and exhibited all the symptoms of spastic diplegia Toward the end of about two and a half years convulsions appeared and the child died during one of the convulsion seizures A study of the brain microscopically revealed the presence of a pronounced perivascular distension in the cortex, especially in the paracentral region The perivascular spaces were four or five times as big as was the vessel itself and in many instances the perivascular spaces were filled partially or entirely with round cells This process was widespread throughout the cortex and there is no doubt that a number of fibers in the cortex must have been compressed and destroyed At all events there was a perceptible degeneration in both lateral columns of the cortex which is best explained in this way He has studied the question of encephalitis extensively from a pathologic standpoint, not only in children but in adults In recent papers he has described a small area of softening in the cortex due to a necrotic process occurring as a result of disease of the vessels from various causes and has also referred to the presence of acute inflammation in the cortex These conditions are most frequently the outcome of tertiary syphilis and are often only seen after careful and extensive study of the brain microscopically

Dr H Lowenburg, Philadelphia, referred to acute infectious diseases and especially measles as causes of hemiplegia He has seen a case of acute hemiplegia in a child in which convulsions occurred on the second day of the eruption and lasted forty eight hours After the convulsions the child had complete hemiplegia of the left side The case was regarded as one of hemorrhage somewhere above the decussation of the seventh nerve, most probably in the cortex. The hemiplegia of the face arm and leg was on the same side. He asked whether in Dr Abt's case the reactions of degeneration were taken In these cases, after their recovery from the acute symptoms, he imagined that the absence or the presence of the reactions of degeneration would help to differentiate the resultant palsy from acute poliomyelitis

Dr. I A Abt, Chicago, said that cases of acute encephalitis vary in intensity Some are rapidly fatal, some give rise to severe and permanent paralyses, and in some marked improvement occurs and only slight paralysis persists Some have epileptic seizures, and in not a few the mentality suffers, the patients becoming feeble minded. So far as the electric reactions are concerned, early in the course of the disease they would have little diagnostic significance Later, the reaction would be proportionate to the amount of descending nerve degeneration

Clinical Notes

DANGER FROM THE CARELESS USE OF THE ALKALOID OF THE SUPRARENAL GLAND

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I feel that it is time to speak a word of caution and warning in regard to the indiscriminate and careless use of a preparation that is being widely advertised and prescribed as harmless, viz, the alkaloid of the suprarenal gland In its proper field and under careful observation, this preparation is very valuable and of great assistance to the operator But I feel that the present reckless use will result in harm and cast opprobrium on a really valuable remedy Several cases that have come under my care have brought this sharply to my notice

DANGER TO THE MUCOUS MEMBRANE

Application of this remedy to the mucous membrane causes an intense shrinking in the caliber of the blood vessels, and when this effect wears away there is a dilatation to and beyond normal The later effect of the preparation is to raise the blood pressure very decidedly, and when the vessels dilate this necessarily causes a marked degree of engorgement of the tissues Every careful observer has doubtless noticed this in his work It is further proved by the greater frequency of secondary hemorrhages following its use in operations.

This relaxation of the vessel walls must be overcome, and Nature is generally able to rectify the condition without trouble. But when a tissue, for any reason, is relaxed time after time it loses its power of returning to normal and in the case of the vessel walls this means an increased blood supply. When this process is repeated, times without number almost, it must follow that a condition of persistent turgescence will present itself and this is the condition I have seen in several of my patients. These patients were all sufferers from rose cold or hay fever, but their later condition is worse than their first.

CASE 1.—J. C., a business man, aged 39, of good habits and good health except for his periodic attacks, was advised by a lay friend to use one of the well known preparations of the suprarenal gland and supplied himself with the remedy and an atomizer in the summer of 1905. He used it several times a day during his attack.

When the hay fever subsided he noticed that there was a fullness in his nose that did not disappear, but on the contrary became more marked. He was treated by his physician for a time without relief and then sought the aid of a rhinologist. The condition refused to yield to any form of treatment and symptoms of Eustachian congestion supervening, it became necessary to remove portions of both middle turbinates. After a long course of treatment he went to his home improved, but bearing traces of the condition with him.

CASE 2.—M. D., a girl, aged 18, under the advice of her physician used one of the preparations several times a day for an attack of rose cold. Her symptoms were much like those of Case 1, but yielded more readily to treatment. No operative interference was necessary, but her mucous membrane is much relaxed and engorged and it is doubtful if she has yet heard the last of it.

CASE 3.—H. R., one of my patients, was treated for rose cold during the past summer and the same condition presented itself. Fortunately the developing turgescence was recognized and the treatment changed, but not early enough to prevent some damage, as a trace of the swelling is still present.

Preparations of this character are being used at present without any supervision, the patient being advised to use them frequently, as there is no likelihood of harm resulting.

I feel that this frequent use will result, in many instances, in a condition that may leave its trace always and that the practice is to be strongly condemned. As already said, the remedy is a valuable one in its proper field, but it should be used with care and under observation.

LATENT TUBERCULOSIS IN CHILDREN

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The editorial in THE JOURNAL, May 19, 1906, on "Latent Tuberculosis in Children" has induced me to submit notes (from memory) of a case of tuberculous meningitis appearing after recovery from measles.

Personal and Family History.—John T., aged 3, illegitimate. Family history showed one case of phthisis and one of tuberculous meningitis, uncle and aunt respectively.

Clinical History.—Patient had measles early in January, 1906. After the rash disappeared the temperature did not fall to normal, but varied from 100 to 101. There were no complications that could be discovered to account for this. Eventually the child was taken to the country. On his return he was no better, rather thinner. His father stated that at night the child was very restless and complained of headache, and very great pain and tenderness in the epigastrium.

The child was extremely irritable, drowsy, and screamed on being touched, so that examination was impossible. Vomiting was not present, pulse, 80, not irregular, respiration normal, temperature, 101, no squint, abdomen full, tongue clean. Later the child became comatose and the classical symptoms of the disease developed, intermittent pulse, vomiting, twitching of upper extremities, Cheyne-Stokes respiration, etc. An ophthalmoscopic examination showed blurring edges of disc and white patches on lower temporal artery. These patches had no pigment edge.

Death occurred fourteen days after arrival from country, so that since onset of restlessness at night and headache, disease terminated on twenty-second day.

The interesting features in this case were the presence of the intense epigastric tenderness and pain. As has been mentioned, vomiting occurred late in disease. Emmet Holt, in the second edition of his book, does not mention this fact, neither do Ashley and Wright in the 1892 edition of their handbook, "Diseases of Children."

The failure of temperature to fall to normal after disappearance of rash with the apparent absence of prominent complications with a family history of tuberculosis should be regarded with suspicion in cases of exanthemata.

The tubercle bacillus is a comparatively new arrival in South Africa. The native races who adopt civilized customs, as well as those who do not, fall an easy prey to its ravages.

THE SUCCESSFUL REMOVAL FROM THE MALE BLADDER OF A LOST FILIFORM BOUGIE BY ENDOVESICAL MANIPULATIONS

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Patient.—Mr. H. was referred to me by Dr. A. E. Mowry for treatment of a very tight stricture in the anterior urethra about 2 cm. inside of the meatus.

Examination.—I found a very nervous, excitable individual with a history of two mild attacks of urethritis and recovery in each instance within two months. The present trouble began about six weeks ago when he noticed that it took him longer to empty his bladder than formerly and that the stream was with difficulty kept in the urinal. This condition has become progressively worse.

Examination.—On having him urinate into the glasses it was observed that the stream was thin, crooked and of slight force, although the act was augmented by using the abdominal muscles. The urine was clear except for a few threads. On palpating the penis a hard indurated mass could be felt on the under side about 2 cm. from the meatus.

Treatment.—On instrumentation it was found that the meatus would admit only a No. 22 F. sound and that this was arrested at 2 cm. from the meatus. I ran down the scale of sounds to 15 F., and none of them passing, I determined to use the urethroscope. When the stricture was observed it appeared to be annular and the mucous membrane over it was practically normal. The opening was plainly visible and not obscured by folds or rugæ. On attempting to pass the filiform of the Le Fort instrument it passed easily and on attaching sound No. 12 F. I was enabled to pass it with little force and there was a sensation of yielding at the strictured point. It was left in place 10 minutes. After withdrawal the patient was able to urinate with much greater freedom. He was told to report for repetition of the treatment on the third day.

He presented himself later reporting that he was much better and had been free from distress since the treatment except that this day he noticed that the stream of urine was becoming a trifle smaller Again the filiform passed easily and the sound No 12 was passed easily in and all went well until I started to depress the handle in order to engage the tip in the membranous urethra, it seemed to catch and then immediately broke away and simultaneously the patient experienced severe pain in the penis At that time I attributed this to the passage of the instrument over the sensitive prostatic urethra or traumatism to the verumontanum, but in reality it was due to the sharp edge of the metal fitting scraping the urethra The apparatus was allowed to remain in place for 10 minutes and when withdrawn the filiform was missing, although its metallic fitting was still firmly screwed to the sound

The patient arose and was told to urinate but no filiform appeared He was then placed on the table and with a slender urethral alligator forceps, which just passed the stricture, the urethra was explored but nothing was obtained

Operation (assisted by Dr Alfred Fowler) —Cocain anesthesia of urethra and meatus was induced The meatus was cut to 30 F with scissors Urethroscopic tube 28 F was introduced to stricture With a Kollman knife the band was divided to 28 F in three places, one ventral incision and one on each lateral wall The tube was slipped past the stricture and digital compression made on it to check hemorrhage. Next the tube was removed and the bladder distended with water The cystoscope (Fig 1) was introduced armed with small vesical forceps (Cabot's), and after a moment or two of manipulation the filiform was located, grasped and removed.

For the relief of such conditions we have two general methods 1 Cutting operations, suprapubic and perineal 2 Intravesical manipulation Cutting operations are simpler, requiring only general instruments and general skill, but they entail a convalescence of at least a week, and in conditions of this sort any opening made in the bladder tends to stay open as long as there is obstruction in the natural passages Hence, after recovery from the operation, the patient is in the same or even worse condition than before

Intravesical manipulations require special instruments and special skill, especially the ability to introduce the instruments through the urethra

In this particular case the latter seemed the best plan of procedure as opening the urethral lumen to a sufficient size to introduce the cystoscope would also be a step in the direction of giving the patient permanent relief from his troubles The period of convalescence after this procedure is practically *nil,* and so, considering everything, I decided to do meatotomy, internal urethrotomy and cystoscopic removal of the filiform

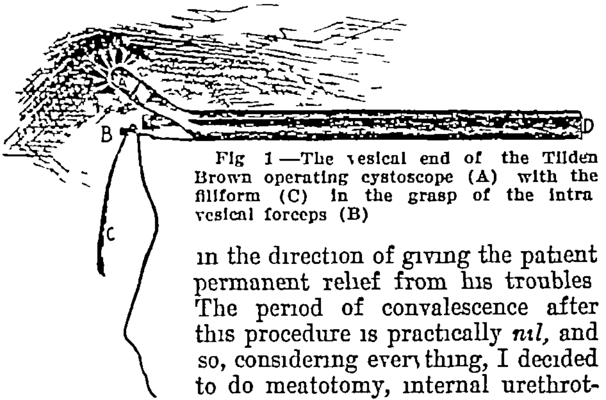

Fig 1 —The vesical end of the Tilden Brown operating cystoscope (A) with the filiform (C) in the grasp of the intra vesical forceps (B)

The Le Fort instrument (Fig 2) employed was one of several purchased one year ago Several of its fellows had cracked, as they usually do, and been discarded This was the second time this particular filiform was used, and, on examination before using, it seemed to be perfect The instruments are made with a single stout thread through the center and frequently crack but this thread usually holds In this instance, the entire filiform came away from its metal fitting

The strain on the instrument during use is lateral and depends on the weight of the sound and the force used by the operator In actual practice this occurs at the entrance to the stricture, or in the normal urethra at the bulbo-membranous junction The filiform is already in a fixed portion of the urethral canal and it must lift the following sound up to the opening Just here the operator should be very careful to have the sound in the axis of the urethra and with gentle manipulations relieve the strain and guide the sound into the fixed portion of the canal

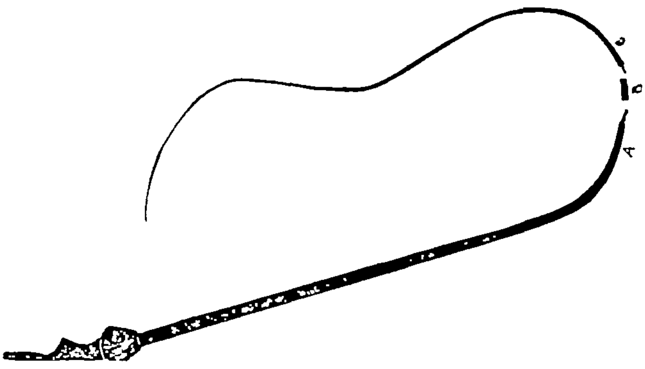

Fig. 2 —The LeFort instrument separated into its component parts (A), the sound, (B) metal fitting, (C), the filiform.

SUMMARY

Conditions in This Case —Man Filiform in bladder, structure hard, admitting No 12 F 2 cm from meatus, meatus admitting No 22 F

Measures Employed—Urination, failure, urethral forceps, failure, meatotomy to 30 F, internal urethrotomy through urethroscopic tube with Kollman's knife to 28 F, hemostasis by digital pressure, cystoscopy, filiform grasped and removed by intravesical forceps, prescription given for urotropin (hexamethylenamin) and patient sent home

Things to Be Learned —1 To examine carefully all instruments before using them 2 To remember that in using instruments or technic one should be prepared in armamentarium and in mechanical skill to meet any possible complication

Result in This Particular Case —The result was most happy The man came into the office with a hard stricture of No 12 F and not nerve enough to have it operated on When he left he had an urethral canal that was 28 F in size and which with proper care will remain so

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RECOVERY FROM PIERCING OF BODY WITH HAY HARPOON

C A. HEATON, M.D
M'CUTCHENVILLE, OHIO

While recoveries are recorded in cases of bullet wounds of the lungs, it is more rare to have recovery take place after a wound by as large an instrument as a large prong of a harpoon hay fork

On July 18, 1906, W Z, 23 years of age, in robust health, was injured by the fall of a double harpoon hay fork, weighing 20 pounds, from its attachment in the barn, 25 feet above him. One prong of the fork, having a diameter of 2 inches one way by ⅞ of an inch the other, perforated the chest, entering in the first intercostal space half an inch to the left of the sternum and emerging in the seventh intercostal space about five inches to the left of the spinal column The distance between the two wounds was about 12 inches The man fell on his knees, but did not lose consciousness and, seeing the crossbar of the fork just in front of his eyes, pushed it upward until he removed the long piece of steel from his body He was able to get off the wagon unaided and with a little assistance walked about ten rods to the house

The patient was found in a condition bordering on collapse from shock and loss of blood Penetration of the lung was indicated by the air mixed with the blood that was flowing from the wounds Fortunately neither clavicle nor ribs were broken, but the clavicle was grazed Assisted by my son, Dr J J Heaton, I proceeded at once to dress the wounds, using every care to have them as aseptic as possible The wound of entrance, which was about two and one half inches long, was closed with several stitches and an antiseptic dressing applied, but the wound of exit was left open to provide for drainage This wound was about one and a half inches in length, slightly smaller than that of entrance on account of the tapering of the prong of the fork toward its end

The patient was put to bed in a semirecumbent position inclining to the left He received during the night three hypodermic injections of morphin sulphate, grain ¼, and a little brandy in hot water The wounds were dressed twice daily for two weeks His improvement was continuous and without incident except a chill which occurred one night a week later This, although exciting apprehension of septicemia, was followed by no serious result

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ACUTE ATROPHY OF THE LIVER FROM CHLOROFORM POISONING

H E CUSHING, M.D
CHAMPAIGN, ILL

History—On Aug 23, 1906, I operated on Mrs C, aged 27, for appendicitis She had had two previous attacks and refused operation for three days before I operated Her history, except the previous attacks, has no bearing on the case She had taken nothing into the stomach but water for 48 hours, and only one half cup of chocolate for 64 hours The bowels had been loose before the attack and were in the best of condition at the time of the operation The administration of chloroform was begun at 9 45 a m, and lasted one and one half hours It was given with great care and was well taken, but required a large quantity, four ounces being used The operation was what we call clean The patient rallied well from the anesthetic, vomited only three times, the last time at 5 p m, and was only slightly nauseated

Postoperative History—On being put to bed the pulse was 96 and of good quality Nitrate of strychnin, gr 1/40, administered hypodermatically every three hours The pulse continued rapid all day, being 94 at 5 p m, with respiration 24

August 24 The patient slept brokenly during the night At 6 a m temperature was 98, pulse 96, respiration 20 At 3 a m she began taking tablets of mild chlorid of mercury, gr 1, soda bicarbonate, gr 4, every hour until she had taken eight She took water freely At 11 30 a m she took 2 drams of a saturated solution of magnesium sulphate and this dose was repeated once an hour for three doses At 2 30 p m, at her request, an enema of soapsuds was given by the nurse This she retained for an hour when it passed with a slight bowel movement and some flatus The bowels moved freely at 5 p m and at 7 p m, there was a slight involuntary movement The kidneys had acted freely, once by catheter, at other times involuntarily At 8 p m. the temperature was 99, pulse 100, and of good quality, respiration 24 The patient had been very nervous and restless all day, there was no pain, but she was continually calling for something, and complained of being hungry There was a peculiar look about the face which I did not like It had a waxy appearance as seen after death

August 25 At 5 a m the temperature was 98, pulse 98, respiration 24 She had not slept much and was restless all night The patient complained of rheumatic pain in the shoulder and chest She had taken one half cup of chicken broth She complained so much of pain that I directed that she be given codein, gr ¼, every half hour until relieved, she took five of these tablets At 12 o clock noon temperature was 98 pulse 90 At 5 p m temperature was 98 3 pulse 102 respiration 26 She had taken one half glass of egg nogg at 10 30 a m, a cup of broth at 1 p m, and an egg nogg at 4 p m, but she vomited immediately after the last She slept nearly all the afternoon At 7 30 p m, she took a cup of broth, and at 10 p m vomited At this hour temperature was 98 and pulse was 102

August 26 At 5 a m. temperature was 97 4 pulse 102, respiration 26 The patient had been very restless and irritable all night She vomited at 2 a m and 5 a m and called for water continually, but was given only a small quantity at a time after 5 a m The abdomen was flat and flatus was passed freely The pupils were dilated but both the same. A marked icteric hue was noticeable on the legs and body The kidneys were acting well but the urine was dark. The patient slept one hour during the morning but was restless when awake At 11 a m temperature was 98 4, pulse 120 At 2 p m, temperature was 99 1 by rectum pulse 130 At 12 30 p m the mind seemed to be wandering At 2 p m the face was deeply flushed and the jaundice color was deeper and had spread over the whole body and face The patient was very restless, throwing her hands to her head, crying out hysterically as if in fear, and pleading piteously Her breath was very offensive, almost fecal in odor The tongue was covered with a dirty brown coat Dr Gray saw the case in consultation with me at 3 p m The abdomen was flat no tympany There was no tenderness except over the gall bladder, where pressure caused flinching The dressings were raised and the wound found in good condition The patient was so restless and was crying out so much that codein, gr ¼, was administered hypodermically, and digitalin gr 1/50, was given in the same way every three hours At 7 p m urine was passed by catheter, at least one pint in quantity At 9 p m the pulse was 120 respiration 26 She was so delirious and restless that codein gr ¼, was given The jaundice color was pronounced over the whole body

August 27 At 3 a m the pulse was 140 At 6 a m pulse was 130 At 8 a m temperature axillary, was 100 4, the patient was very yellow in color Every point where the hypodermic needle had been used showed a hemorrhagic spot and hemorrhagic spots appeared on the body The patient was in a comatose condition all night the pupils were dilated to the full extent At 7 a m 10 ounces of urine were passed by catheter, this was saved and analyzed The temperature and pulse rose at 12 30 p m axillary temperature was 104 8 pulse, 148

The patient died at 1 45 p m one hundred hours from the time of beginning the anesthetic No postmortem examination was allowed

Examination of Urine—Dr Jennie Lyons made a thorough examination of the urine and made the following report

Urine catheterized specimen Chemical examination Color, greenish yellowing brown Urine not clear precipitate yellow Specific gravity 1 015 Reaction acid Albumin, small amount No sugar Bile by nitric acid test acetone

Microscopic examination Granular casts Leucin Tyrosin

TYPHOID FEVER IN A PATIENT AGED SEVENTY YEARS

WILLIAM G DAGGETT A B M D
Clinical Lecturer in Medicine Yale University
NEW HAVEN, CONN

The infrequency of the occurrence of typhoid fever in persons of advanced years has long been a matter of note and makes it seem important to place on record the following case which came under my observation

Patient—Mrs F P aged 70 had never had a serious illness Family history was negative

Present Illness—Patient passed most of the winter of 1905 06 in Florida and noticed no departure from her usual health until late in March, when she found herself very easily fatigued She left Florida, March 29 for Savannah Ga and remained in the latter place until April 12 While in Savannah she had more or less diarrhea and marked l
arrived in Washington D C, April 13 Th

sisted and her strength was notably below par On April 19 she fell on a marble staircase in her hotel and sustained a scalp wound, which entailed a moderate loss of blood and required several stitches Then for the first time she came under medical observation, and on April 22 a nurse was employed. During the ensuing four days her temperature ranged from 99 6 to 102 8, and on April 25 several rose spots were discovered on the abdomen

Clinical History—She was at once removed to the Garfield Memorial Hospital with a diagnosis of typhoid fever On admission no Widal reaction could be obtained, the urine showed the presence of albumin and hyaline and granular casts a blood count gave the number of leucocytes as 8,132, and a vaginal examination showed considerable discharge from a senile endometritis The temperature fell gradually until, on May 1, it was normal The negative result of the Widal test, the subsidence of the temperature, and the discovery of other conditions which might account for some constitutional disturbance caused the abandonment of the idea that she was suffering from typhoid infection She left Washington and came directly to her home in New Haven, still weak, but able to be up and dressed

I saw her for the first time on May 8, when, about 8 a m, she had a sharp chill lasting about one hour, with her temperature rising to 104 This was followed by a continued fever, which lasted until May 23, the temperature declining by lysis On May 10 one characteristic rose spot was found on the abdomen The vaginal discharge ceased shortly after her arrival in New Haven During the febrile period there were no toxic symptoms, and her convalescence was uneventful

Laboratory Findings—The laboratory findings at various times were as follows

April 25, blood examination by Dr H H. Donnally, Washington, showed hgb, 65 per cent, no Widal reaction, 12,700 leucocytes, no plasmodia, and slight poikilocytosis

April 26, at the Garfield Memorial Hospital, the leucocytes numbered 8 132 April 27, at the same hospital, urine examination resulted as follows Color, lemon, reaction, acid, appearance, cloudy, specific gravity, 1,010, albumin, a faint pus trace, a few hyaline and finely granular casts, a moderate number of flat epithelial cells, some round cells, one cuboidal cell, and a large number of leucocytes

May 9 Dr C J Bartlett, professor of pathology in Yale University, examined the blood and found 5 288 r b c., 8 980 w b c, no plasmodia malariæ and a partial, though insufficient response to the Widal test Differential count gave 66 5 per cent of polymorphonuclear leucocytes, 26 75 per cent small mononuclears, and 6 75 per cent large mononuclears

May 13 Dr Bartlett made a second Widal test which resulted in a somewhat more pronounced clumping, but still not sufficient for a positive diagnosis His urine examination showed rather less than 0 01 per cent of albumin, some granular casts and a few pus cells

June 18 urine examination by Dr D M Lewis, bacteriologist of the board of health of New Haven showed a trace of albumin and marked bacilluria From this specimen, which was obtained by catheter under strict precautions, a pure culture of the colon bacillus was isolated

June 27, Dr Lewis obtained a positive Widal reaction and no reaction from the organism found in the urine

The clinical history and laboratory findings thus show that the patient suffered from a mild typhoid infection, with a relapse a coincident senile endometritis, and a subacute nephritis caused by the colon bacillus

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THE CURE OF TUBERCULOUS PERITONITIS

ROBERT L PITFIELD M D

PHILADELPHIA.

It has long been known that if a case of primary tuberculosis of the peritoneum is operated on, the peritoneal cavity merely opened and then closed, the disease undergoes a retrograde change, the patient sometimes recovering permanently

At one time it was supposed that the iodoform sprinkled in the cavity of the peritoneum had something to do with the cure Again, others thought that the simple entrance of air was a factor

It has occurred to me after aiding in the opening of the peritoneum in a case of primary tuberculosis of that cavity that the surgeon unwittingly performed Pfeiffer's phenomenon After simply opening the peritoneum evacuating some fluid and closing it the patient began to improve and now, after three months, is nearly well Instead of the air doing any good, the improvement may have been wrought by the access of some of the patient's blood to the serous cavity The blood, no doubt, in all such cases contains some immune serum and the serous fluid contains some complement perhaps

Immune serum plus complement, plus tubercle bacilli, may effect a bacteriolysis of the latter, as in the case of cholera bacilli, when some serum from an animal immunized against cholera bacilli and the natural serum (complement) in the peritoneal cavity, if mixed either in the peritoneal cavity or in a test tube effect a solution of the bacilli Members of the myco-bacteriaceæ group (tubercle bacilli) do not dissolve ordinarily in the presence of either immune serum or some complement serum or both, but they may do so in the body Or, the admixture of the immune serum with the peritoneal contents may effect a destruction of the bacilli by reason of the opsonins that it may contain, or in some other way stimulate phagocytosis

At any rate, it would do the patient very little harm to allow some of his own blood to remain behind in the peritoneum after a section, and I write this merely as a suggestion to surgeons to try this simple experiment of leaving a few drams of blood behind before closing the abdomen in tuberculous peritonitis cases that come to operation

In support of this theory that the free blood in the peritoneum effects a cure in some cases, I need but mention that in those cases that are thoroughly irrigated recovery is not nearly so apt to take place

5211 Wayne Avenue Germantown

CESAREAN SECTION PERFORMED BY A COW

W B MORSE, M D

SALEM, OREGON

[We recently received a newspaper clipping giving an account of a pregnant woman being gored by a cow, the abdominal walls and the uterus being lacerated so that the child was born We wrote to Dr Morse about the matter and he states that the newspaper account was correct His report follows—Ed]

Mrs W F aged 31, pregnant at full term with her third child, was standing in the road about 60 feet from the house, watching her husband unload hay from a wagon A vicious two year old heifer charged her and inserted a very sharp horn into the abdomen near the anterior superior spinous process of the ilium It penetrated the abdominal wall, uterus and membranes, but escaped the child The point of the horn then emerged again just to one side and below the umbilicus The result was two transverse rents, the upper one about 5 inches long and the other clear across the abdomen The child was delivered through the larger opening and fell to the road, where it was picked up by the father I made an eight mile trip and arrived about 20 minutes after the mother's death from hemorrhage. The uterus was outside the body, torn clear across and inverted with afterbirth and membranes, still attached The child is still alive and doing well I have found histories of several similar cases in Gould and Pyle's work on medical curiosities

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON-OFFICIAL REMEDIES." THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

EUCAMUL

An emulsion of oil of eucalyptus in glycerin and honey containing 0.13 Cc. (2 minims) of the eucalyptus oil in 4 Cc. (1 fluidram).

Dosage.—2 to 4 Cc. (½ to 1 fluidram), as needed.

Prepared by Edward G. Binz, Los Angeles, Cal.

EUGALLOL

A solution consisting of two parts of monoacetylpyrogallol, $C_6H_3(OH)_2(CH_3COO)$, and one part of acetone.

It is prepared by treatment of pyrogallol with acetic anhydride or acetyl chloride in the presence of a solvent and subsequent removal of the solvent by distillation. It is also obtained by other methods.

It is a syrupy dark yellow transparent liquid readily soluble in water and in acetone and containing 60 per cent. of monacetylpyrogallol.

Actions and Uses.—Eugallol acts as an energetic substitute for pyrogallol, but is liable to produce local irritation when applied to the skin.

It is recommended for external use in old and persistent cases of psoriasis.

Dosage.—It is applied pure by pencilling once a day, covering the painted part with powdered zinc oxide, suspending the application a few days if it is followed by irritation.

Manufactured by Knoll & Co., Ludwigshafen a. Rh. and New York. German patent No. 104 663.

EUMYDRIN

METHYLATROPINE NITRATE. ATROPINEMETHYL NITRATE.

Eumydrin, $C_6H_5(HO.CH_2)CH.CO_2.C_7H_{11}N(CH_3)_2.NO_3 = C_{18}H_{26}O_6N_2$, is the nitrate of methylated atropine.

It is obtained by the interaction of methyl atropine halide with metallic nitrates, or by treatment of the methyl atropine base with nitric acid, by interaction of atropine with methyl nitrate and by other patented processes.

It is a white, crystalline salt, melting at 163° C. (325.4° F.), odorless, permanent and readily soluble in water or alcohol, but very sparingly soluble in ether or chloroform. A quantity of 100 parts contains atropine equivalent to about 90 parts of atropine sulphate.

On warming 0.01 Gm. of eumydrin with 1.5 Cc. of sulphuric acid until the solution begins to darken and at once adding carefully 2 Cc. of water a violet color develops and at the same time a faint peculiar aromatic odor appears. A solution of 0.05 Gm. of eumydrin in 3 Cc. of water remains clear on the addition of either 1 Cc. of sodium hydroxide solution or of ammonia water.

Being an alkaloidal salt it is incompatible with alkaline solutions, etc.

Actions and Uses.—Eumydrin is a mydriatic and antihydrotic, replacing atropine sulphate both internally and externally in corresponding doses. It is claimed that it dilates the pupil more rapidly than atropine and the dilatation is of shorter duration—being intermediate in these respects between atropine and homatropine. It is said to be much less toxic than atropine so that larger doses may be given to secure the effect. It is particularly recommended for the treatment of night sweats, whooping cough and the relief of enuresis.

Dosage.—Internally as an antihydrotic, 0.001 to 0.0025 Gm. (1/60 to 1/24 grain). Externally as mydriatic in solutions about one-tenth stronger than the usual atropine solutions.

Manufactured by Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York). German patent Nos. 137 622 and 138 443.

EUPHORIN

PHENYL URETHANE. PHENYLETHYLURETHANE. PHENYLCARBAMIC ACID ETHYL ESTER.

Euphorin, $CO(HN.C_6H_5)(OC_2H_5) = C_9H_{11}O_2N$, is a compound closely allied to Æthylis Carbamas, U. S. P. (urethane) and differing from this by the replacement of the group NH_2 by NHC_6H_5.

It is prepared by the action of aniline on chlorformic acid ethyl ester.

It forms colorless needles or a white powder melting at 50-51° C. (122-123.8° F.), having a faint aromatic odor and clove-like taste. It is almost insoluble in water, readily soluble in diluted alcohol, in alcohol and in ether.

Actions and Uses.—Euphorin is anodyne, antipyretic and antiseptic.

It is recommended in rheumatism, sciatica, headache, etc. Externally it is recommended to be applied as a dusting powder in venereal and skin diseases, ulcers, burns, etc.

Dosage.—0.5 to 1 Gm. (8 to 15 grains) dissolved in wine or suspended in water; externally in powder, in lanolin ointment and in superfatted soap.

Manufactured by Fabrik von Heyden, Radebeul near Dresden. U. S. trademark.

EUPHTHALMIN

EUPHTHALMINE HYDROCHLORIDE. PHENYLGLYCOLYL-METHYL-VINYL DIACETONALKAMINE HYDROCHLORIDE.

Euphthalmin, $C_{17}H_{25}NO_3.HCl$, is a mandelic acid derivative of beta-eucaine.

It is prepared by methylating vinyldiacetonalkamine (obtained as explained under beta-eucaine), treating the methylvinyldiacetonalkamine produced with a weak solution of mandelic acid (phenylglycollic acid), dissolving the base (euphthalmine) so obtained in ether, passing gaseous hydrochloric acid into the solution and crystallizing the salt from its ether solution.

It is a colorless crystalline powder, melting at 183° C. (361.4° F.), readily soluble in water and in 2 parts of alcohol.

Actions and Uses.—Euphthalmin produces prompt mydriasis free from anesthetic action, pain, corneal irritation, or rise in arterial tension. It has little or no effect on accommodation, and this disappears more rapidly than with atropine, cocaine, homatropine, etc. In its effects on the general system, euphthalmine very closely resembles atropine.

It is recommended as an aid in ophthalmoscopic examinations in place of atropine, homatropine, etc.

Dosage.—2 or 3 drops of a 5 to 10 per cent. solution, according to age of the patient and the nature of the case, are instilled into the eye.

Manufactured by Chemische Fabrik auf Actien vorm. E. Schering, Berlin (Schering & Glatz, New York). U. S. patent No. 663 754. U. S. trademark No. 35 541.

EUQUININE

QUININE ETHYL CARBONATE. EUCHININ. CHININUM AETHYLCARBONICUM.

Euquinine, $C_2H_5O.CO.OC_{20}H_{23}N_2O = C_{23}H_{[illegible]}O_4N_2$, is quinine ethyl carbonic acid ester.

It is prepared by the action of chlorocarbonic ethyl ester on quinine: $C_2H_5O.COCl + C_{20}H_{24}N_2O_2 = HCl + C_2H_5O.CO.OC_{20}H_{23}N_2O$.

It is a light fleecy conglomeration of delicate white needles, melting at 9[illegible]° C. (20[illegible]° F.) and practically [illegible]. It is sparingly soluble in water but readily soluble in [illegible] ether and chloroform. It is slightly alkaline in reaction, forming well crystallizable bitter salts with acids. It [illegible] a [illegible] tannate.

Its solutions in acidulated water have the characteristic bitter taste of quinine On heating a mixture of 0 2 Gm of euquinine, 8 Cc of solution of sodium hydroxide and a little iodine, the odor of iodoform is manifested. Like quinine its solution in dilute sulphuric acid exhibits strong blue fluorescence, and it gives also the so-called thalleioquin reaction but not the herapathite reaction. A solution in nitric acid should not change on addition of either silver nitrate or barium chloride

It should leave no residue on combustion

It is incompatible with acids which will develop the bitter quinine taste.

Actions and Uses—Euquinine is claimed to have the same action as quinine, with the advantage of being tasteless, owing to its insolubility in water and alkaline media

Dosage—The same as quinine

Manufactured by Vereinigte Chininfabriken, Zimmer & Co, Frankfort a M. (Merck & Co, New York) U S patent No 585 068 U S trademarks Nos 640,977 and 701 523

EURESOL

RESORCIN MONACETATE MONACETYL-RESORCINOL

Euresol, $C_6H_4(OH)(CH_3COO) = C_8H_8O_3$, is an acetic acid ester of resorcinol (1,3-phen-diol)

It is obtained by acting on resorcinol with acetic anhydride or acetyl chloride, thus $C_6H_4(OH)_2 + CH_3COCl = C_6H_4(OH)(CH_3COO) + HCl$, or by otherwise replacing one hydroxyl group in resorcinol with an acetyl group

It is a thick honey yellow oily liquid having an agreeable odor, boiling at 283 C (541 4° F) and soluble in acetone.

Actions and Uses—Its action is similar to that of resorcinol, but milder and more lasting because of the gradual liberation of the phenol

Euresol is recommended in acne, sycosis, seborrhea, and particularly in the treatment of chillblains

Dosage—It is applied in 5 to 20 per cent ointments and in acetone solution

Manufactured by Knoll & Co., Ludwigshafen a Rh. and New York. German patents Nos 103,857 and 122,145

EURESOL SOAP

CHILLBLAIN SOAP

A soft soap supplied in tubes, containing euresol, eucalyptol and oil of turpentine

Prepared by Knoll & Co, Ludwigshafen and New York.

EUROPHEN

DI-ISOBUTYL-CRESOL IODIDE ISOBUTYL-ORTHOCRESOL IODIDE IODOSO-DIISOBUTYL-CRESOL

Europhen, $C_6H_3(C_4H_9)(CH_3)(OI)C_6H_2(CH_3)(\ O)(C_4H_9) = C_{22}H_{29}O_2I$, is a condensation product of 2 molecules of isobutylorthocresol, with 1 atom of iodine, analogous to Thymolis Iodidum, U S P

It is prepared by the addition of a solution of iodine in potassium iodide to an alkaline solution of isobutylcresol washing the *precipitate with water and drying it at a moderate temperature.*

It forms a yellow voluminous powder, fusing at 110° C. (230° F), containing 28 per cent. of iodine and having a faint saffron like odor It is insoluble in water or glycerin but readily soluble in alcohol ether chloroform and the fixed oils It is permanent in the dry state, but splits off iodine readily when moistened and rapidly when heated with water at 70 C. (158° F) particularly in the presence of alkalies.

When triturated with glycerin and water it yields a filtrate which is turned bluish by the addition of freshly prepared starch paste Its alcoholic solution produces a yellow precipitate with mercuric chloride.

It should not be exposed to heat light, or damp air It is incompatible with starch metallic oxides, mercuric salts and alkaline hydrates and carbonates.

Actions and Uses—Its action is similar to that of iodoform and thymol iodide It is claimed especially to be useful in the treatment of venereal ulcerations

Dosage—Europhen may be given internally in the form of pills in doses of from 0 2 to 0 3 Gm (3 to 5 grains) Locally it may be used as a dusting powder in substance or mixed with an equal quantity of finely powdered boric acid, as an ointment, with wool fat (lanolin), or as a 5 per cent embrocation, dissolved in olive oil

Manufactured by Farbenfabriken vorm. Friedr Bayer & Co., Elberfeld Germany (Continental Color & Chemical Co New York) U S patent No. 495 204, German patent No 56 830 U S trademark No 17,888.

FERRICHTHYOL

FERRIC ICHTHYOL

A derivative of ichthyol in which about 2 5 per cent of iron is contained

It is a brown black, voluminous non hygroscopic powder, nearly odorless and tasteless. It is insoluble in the ordinary solvents as also in diluted acids and alkalies.

Actions and Uses—It is said to be alterative, antiseptic, hematinic and tonic It is recommended in anemia, chlorosis, etc

Dosage—1 to 2 Gm (15 to 30 grains) in tablets

Manufactured by the Ichthyol Co, Hamburg (Merck & Co New York)

FERRIPYRINE

A name applied to a product identical with Ferropyrine, which see

Manufactured by Farbwerke vorm Meister Lucius & Bruening, Hochst a. M. (Victor Koechl & Co, New York)

FERROPYRINE

ANTIPYRINEFERRIC CHLORIDE ANTIPYRINA CUM FERRO

Ferropyrine, $(C_{11}H_{12}N_2O)_3(FeCl_3)_2$, is a compound of antipyrine and ferric chloride, containing about 36 per cent of ferric chloride and 64 per cent of antipyrine

It is prepared by mixing solutions of 5 parts of crystallized ferric chloride in 10 parts of 96 per cent. alcohol and 5 parts of antipyrine in 10 parts of alcohol and 50 parts of ether washing the precipitate with ether, and drying it on porous tiles at 40 C. (104° F)

It is a yellowish red, crystalline powder, having an acid astringent taste. *It is soluble in 5 parts of cold water but requires* 9 parts of hot water for solution, it is soluble in alcohol but insoluble in ether

It should form a clear blood red solution in water Its aqueous solution 1 5 affords a precipitate of ferric hydroxide on addition of ammonia in excess and the filtrate should give no reaction for nitric or sulphuric acid nor heavy metals and should yield a residue on evaporation which is completely volatilized when heated on platinum. After acidification with nitric acid the filtrate yields a white precipitate with silver nitrate and in the filtrate from this the antipyrine may be determined by means of ferric chloride or by nitrous acid.

It is incompatible with alkalies, their carbonates and bicarbonates.

Actions and Uses—It is hematinic, hemostatic, astringent, analgesic and tonic Its styptic action is pronounced and said not to be accompanied by irritant effects According to Fraenkel it combines with its hemostatic properties the injurious by-actions which limit the application of ferric chloride as a hemostatic

It is recommended internally in anemia, chlorosis gastric and intestinal hemorrhage, intestinal catarrh, etc, in migraine and neuralgia Externally it is applied in gonorrhea, epistaxis, hemorrhages from the throat or vagina, or bleeding after tooth extraction, etc

Dosage—0 3 to 1 Gm (5 to 15 grains) in powder, with sugar and peppermint, or in solution Externally 1 to 1 5 per cent solution as injection, to 20 per cent solution or pure for hemorrhages

Manufactured by Knoll & Co Ludwigshafen U S patent No 548 352. U S trademark No 20,860

FORMALIN

A name applied to Liquor Formaldehydi, U S P

Manufactured by Chemische Fabrik auf Actien vorm E. Schering Berlin (Schering & Glatz New York) U S trademark No 23 629

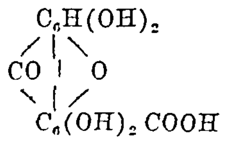
FORMIN

A name applied to Hexamethylenamina, U S P

Manufactured by E. Merck Darmstadt. (Merck & Co New York)

GALLOGEN

ELLAGIC ACID BENZOARIC ACID

Gallogen, 

$$\begin{matrix} & C_6H(OH)_2 & \\ CO & | & O \\ & C_6(OH)_2COOH & \end{matrix}$$

$= C_{14}H_6O_8$ is anhydrous ellagic acid prepared from Divi-divi, the pods of *Cæsalpina coriaria,* containing more than 50 per cent of tannin

It is prepared by prolonged boiling of an aqueous extraction of divi divi whereby the amorphous acid assumes a crystalline condition and is completely precipitated, then collecting the precipitate washing and drying

It is a yellowish odorless tasteless powder insoluble in all acid and neutral liquids but soluble in alkaline liquids to the amount of 2 per cent., such solutions being, however very readily oxidized.

Its solutions in alkaline media give all the reactions of tannic acid with iron salts gelatin solution etc. With fuming nitric acid it gives a characteristic dark red color

It is incompatible with alkaline liquids

Actions and Uses—Gallogen is an astringent and antidiarrheic, slowly decomposed in the intestinal tract, thus exerting its astringent action gradually during its passage

It has been recommended in dysentery, cholera infantum, diarrhea, and is said to be useful even in those of a syphilitic or tuberculous origin

Dosage—0 3 to 0 5 Gm (5 to 8 grains) for children, 0 6 to 1 Gm (10 to 15 grains) for adults, suspended in neutral or slightly acid media

Manufactured by Ad. Heinemann Eberswalde (C Bischoff & Co New York) German patents Nos. 137,033 and 137,034

GERMICIDAL SOAP

A solid product containing 2 per cent. of mercuric iodide in combination with hard soap.

It is a bluish white powder compressed into cakes It is soluble in water

Actions and Uses—It is claimed to be a disinfectant which does not coagulate albumin nor corrode steel or nickel It is stated by the manufacturers that its germicidal activity has been thoroughly tested on typhoid, cholera, diphtheria and pus germs, which it destroys within one minute

It is recommended for the disinfection of the hands and for washing out infected cavities

Dosage—Applied externally, dissolved in water A mild form is also prepared containing 1 per cent of mercuric iodide, also a soft soap containing 1 per cent of mercuric iodide

Prepared by Parke Davis & Co Detroit Mich

GLUTOL-SCHLEICH

FORMALIN GELATIN

A chemical combination of gelatin and formaldehyde

It is prepared by dissolving 500 Gm of gelatin in 375 Gm of water adding 25 *drops of formaldehyde* solution exposing the mass so obtained, in a covered box over lime, to the vapor of formaldehyde by the aid of a layer of cotton wool saturated with it until a dry mass is produced and reducing this to powder

It is a white, odorless powder insoluble in water under ordinary conditions but dissolved when heated with water under pressure the solution thus produced gelatinizing on cooling It is not changed by the action of acids alkalies or saline compounds of any reaction but is slowly decomposed in contact with living cells It may be sterilized *without decomposition*

Action and Uses—It is claimed that while in itself non-antiseptic, non-irritant and non-toxic, it becomes antiseptic and bactericidal in contact with living cells, in consequence of the elimination of nascent formaldehyde, which is split off very slowly but steadily

Glutol is recommended as an odorless, non-irritant, non-poisonous aseptic dressing having sustained antiseptic action for wounds, ulcers, burns, etc

Dosage—It is employed undiluted as a dusting powder, etc

Manufactured by Chemische Fabrik auf Actien vorm E Schering Berlin (Schering & Glatz New York) German patent No 104 365 U S patent No 572 205 U S. trademark No 28 431

GLYCERIN EMOLLIENT

A mixture containing Oil of gaultheria 2 Gm (30 grains) boric acid 23 Gm (¾ ounce) corn starch 88 Gm (3 ounces) glycerin 885 Gm (28 ounces) tragacanth 17 Gm (263 grains) It is a transparent soft solid

Actions and Uses—It is intended for use as a lubricant in gynecologic and surgical practice

Dosage—It is put up in collapsible tubes and is to be applied to the dry skin After use it can be washed off in a stream of water

Prepared by Parke Davis & Co Detroit Mich

GLYCEROPHOSPHATES

GLYCERINOPHOSPHATES GLYCERYLPHOSPHATES

Glycerophosphates are the salts of glycerophosphoric acid, $H_2(CH_2OH\ CHOH\ CH_2)PO_4$, usually the two remaining hydrogen atoms of phosphoric acid are replaced by the base $Na_2(CH_2OH\ CHOH\ CH_2)PO_4$

The calcium compound is prepared by heating glycerin and phosphoric acid under certain conditions for a considerable time and then neutralizing with lime The precipitated calcium phosphate is removed while the calcium glycerophosphate remains in solution. From the calcium salt the other salts can be prepared by precipitating calcium by the appropriate salt of the metal whose glycerophosphate is desired Thus the addition of sodium carbonate to a solution of calcium glycerophosphate yields insoluble calcium carbonate and a solution of sodium glycerophosphate

The potassium and sodium glycerophosphates are dense syrupy liquids exceedingly soluble in water and represent 75 per cent of the respective salts in a dry condition The calcium iron lithium magnesium and manganese glycerophosphates are pulverulent salts, moderately soluble in water

When a solution of a glycerophosphate is tested by ammonium molybdate for the presence of a phosphate only a slight yellow precipitate should form at once

The watery solutions of glycerophosphates decompose in a short time. They should be made from sterilized water but hot liquids should not be used for their preparation

Actions and Uses—These salts were introduced as "nerve foods" and tonics on the theory that their phosphorus, being a step nearer lecithin, is assimilated more readily than that of hypophosphites Neither the experimental nor the clinical evidence is considered conclusive by all authorities

Dosage—The potassium and sodium salts may be given hypodermically 0 2 to 0 25 Gm (3 to 4 grains) in normal saline solution, or *per os* 0 25 to 0 65 Gm (4 to 10 grains) in water or syrup The calcium, iron, lithium, magnesium and manganese salts 0 2 to 0 65 Gm (3 to 10 grains) doses, preferably in the form of tablets, the quinin salt in 0 1 to 0 33 Gm (1½ to 5 grains), and the strychnine salt in 0 001 to 0 003 Gm (1/60 to 1/20 grain) doses

GUAIACOL-SALOL

SALICYLATE OF GUAIACOL. GUAIACOLIS SALICYLAS

Guaiacol-salol, $C_6H_4\ OH\ COO(C_6H_4\ OCH_3) = C_{14}H_{12}O_4$, *is the salicylic ester of guaiacol, analogous to* salol

It is prepared by treating a mixture of sodium salicylate and sodium guaiacolate in molecular proportions with phosphorus oxychloride washing the product of the reaction with water and crystallizing from alcohol

It is a white crystalline powder tasteless but having a salol like odor It is insoluble in water but soluble in alcohol ether and chloroform *It melts at 60° C (140° F)*

Being an ester it is decomposed by alkalies and alkaline carbonates with the formation of alkali salicylate and alkali guaiacolate Strong acids decompose it with the liberation of guaiacol and salicylic acid The alcoholic solution is colored wine red by the addition of ferric chloride but if the alcoholic solution be dropped into a watery solution of ferric chloride a turbidity but no coloration is produced

Actions and Dosage—This compound acts like its constituents, being antiseptic and antirheumatic It is recommended in phthisical diarrhea, dysentery, rheumatism, marasmus, chorea, etc

Dosage—1 Gm (15 grains)

Manufactured by the Fabrik von Heyden Radebeul near Dresden (Merck & Co New York)

Correction Concerning Cascara Tonic Laxative Globules—In The Journal, Sept 29 1906 page 1021, concerning Cascara Tonic Laxative Globules it is stated that each globule is said to contain 0.2 gm (30 grains) etc This should read Each globule is said to contain 0 2 gm (3 grains) etc

Its solutions in acidulated water have the characteristic bitter taste of quinine On heating a mixture of 0 2 Gm. of euquinine, 3 Cc. of solution of sodium hydroxide and a little iodine the odor of iodoform is manifested Like quinine its solution in dilute sulphuric acid exhibits strong blue fluorescence and it gives also the so-called thalleioquin reaction but not the herapathite reaction A solution in nitric acid should not change on addition of either silver nitrate or barium chloride.

It should leave no residue on combustion

It is incompatible with acids which will develop the bitter quinine taste.

Actions and Uses—Euquinine is claimed to have the same action as quinine, with the advantage of being tasteless, owing to its insolubility in water and alkaline media

Dosage—The same as quinine

Manufactured by Vereinigte Chininfabriken Zimmer & Co Frankfort a. M (Merck & Co New York) U S patent No 585 068 U S trademarks Nos 640 977 and 701,523

EURESOL

RESORCIN MONACETATE MONACETYL-RESORCINOL

Euresol, $C_6H_4(OH)(CH_3COO) = C_8H_8O_3$, is an acetic acid ester of resorcinol (1,3-phen-diol)

It is obtained by acting on resorcinol with acetic anhydride or acetyl chloride, thus $C_6H_4(OH)_2 + CH_3COCl = C_6H_4(OH)(CH_3COO) + HCl$, or by otherwise replacing one hydroxyl group in resorcinol with an acetyl group

It is a thick, honey yellow oily liquid having an agreeable odor boiling at 283° C. (541 4° F) and soluble in acetone.

Actions and Uses—Its action is similar to that of resorcinol, but milder and more lasting because of the gradual liberation of the phenol

Euresol is recommended in acne, sycosis, seborrhea, and particularly in the treatment of chilblains

Dosage—It is applied in 5 to 20 per cent ointments and in acetone solution

Manufactured by Knoll & Co Ludwigshafen a. Rh and New York. German patents Nos 103,857 and 122 145

EURESOL SOAP

CHILLBLAIN SOAP

A soft soap supplied in tubes, containing euresol, eucalyptol and oil of turpentine

Prepared by Knoll & Co Ludwigshafen and New York.

EUROPHEN

DI-ISOBUTYL-CRESOL IODIDE ISOBUTYL-ORTHOCRESOL IODIDE IODOSO-DIISOBUTYL-CRESOL.

Europhen, $C_6H_3(C_4H_9)(CH_3)(OI)C_6H_2(CH_3)(O)(C_4H_9) = C_{22}H_{29}O_2I$, is a condensation product of 2 molecules of isobutylorthocresol, with 1 atom of iodine, analogous to Thymolis Iodidum, U S P

It is prepared by the addition of a solution of iodine in potassium iodide to an alkaline solution of isobutylcresol washing the precipitate with water and drying it at a moderate temperature

It forms a yellow, voluminous powder fusing at 110 C. (230° F) containing 28 per cent. of iodine, and having a faint saffron like odor It is insoluble in water or glycerin, but readily soluble in alcohol ether chloroform and the fixed oils. It is permanent in the dry state but splits off iodine readily when moistened, and rapidly when heated with water at 70° C. (158° F) particularly in the presence of alkalies

When triturated with glycerin and water it yields a filtrate which is turned bluish by the addition of freshly prepared starch paste Its alcoholic solution produces a yellow precipitate with mercuric chloride.

It should not be exposed to heat, light, or damp air It is incompatible with starch, metallic oxides mercuric salts and alkaline hydrates and carbonates.

Actions and Uses—Its action is similar to that of iodoform and thymol iodide It is claimed especially to be useful in the treatment of venereal ulcerations

Dosage—Europhen may be given internally in the form of pills in doses of from 0 2 to 0 3 Gm (3 to 5 grains) Locally it may be used as a dusting powder in substance or mixed with an equal quantity of finely powdered boric acid, as an ointment, with wool fat (lanolin), or as a 5 per cent embrocation, dissolved in olive oil

Manufactured by Farbenfabriken vorm Friedr Bayer & Co Elberfeld, Germany (Continental Color & Chemical Co New York) U S patent No. 497 204, German patent No 56 830 U S trademark No 17,888

FERRICHTHYOL

FERRIC ICHTHYOL

A derivative of ichthyol in which about 2 5 per cent of iron is contained

It is a brown black, voluminous, non hygroscopic powder, nearly odorless and tasteless It is insoluble in the ordinary solvents as also in diluted acids and alkalies.

Actions and Uses—It is said to be alterative, antiseptic, hematinic and tonic It is recommended in anemia, chlorosis, etc.

Dosage—1 to 2 Gm (15 to 30 grains) in tablets

Manufactured by the Ichthyol Co Hamburg (Merck & Co New York)

FERRIPYRINE

A name applied to a product identical with Ferropyrine, which see

Manufactured by Farbwerke vorm Meister Lucius & Bruening, Hochst a M. (Victor Koechl & Co, New York)

FERROPYRINE

ANTIPYRINEFERRIC CHLORIDE ANTIPYRINA CUM FERRO

Ferropyrine, $(C_{11}H_{12}N_2O)_3(FeCl_3)_2$, is a compound of antipyrine and ferric chloride, containing about 36 per cent of ferric chloride and 64 per cent of antipyrine

It is prepared by mixing solutions of 5 parts of crystallized ferric chloride in 10 parts of 90 per cent. alcohol and 5 parts of antipyrine in 10 parts of alcohol and 50 parts of ether, washing the precipitate with ether, and drying it on porous tiles at 40 C (104 F)

It is a yellowish red, crystalline powder, having an acid astringent taste. It is soluble in 5 parts of cold water but requires 9 parts of hot water for solution, it is soluble in alcohol but insoluble in ether

It should form a clear blood red solution in water Its aqueous solution 1 5 affords a precipitate of ferric hydroxide on addition of ammonia in excess and the filtrate should give no reaction for nitric or sulphuric acid nor heavy metals, and should yield a residue on evaporation which is completely volatilized when heated on platinum After acidification with nitric acid the filtrate yields a white precipitate with silver nitrate and in the filtrate from this the antipyrine may be determined by means of ferric chloride or by nitrous acid.

It is incompatible with alkalies, their carbonates and bicarbonates.

Actions and Uses—It is hematinic, hemostatic, astringent, analgesic and tonic Its styptic action is pronounced and said not to be accompanied by irritant effects According to Fraenkel it combines with its hemostatic properties the injurious by-actions which limit the application of ferric chloride as a hemostatic

It is recommended internally in anemia, chlorosis, gastric and intestinal hemorrhage, intestinal catarrh, etc, in migraine and neuralgia Externally it is applied in gonorrhea, epistaxis, hemorrhages from the throat or vagina, or bleeding after tooth extraction, etc

Dosage—0 3 to 1 Gm (5 to 15 grains) in powder, with sugar and peppermint, or in solution Externally 1 to 1 5 per cent solution as injection, to 20 per cent solution or pure for hemorrhages

Manufactured by Knoll & Co Ludwigshafen U S patent No 548,352. U S trademark No 26 860

FORMALIN

A name applied to Liquor Formaldehydi, U S P

Manufactured by Chemische Fabrik auf Actien vorm E Schering, Berlin (Schering & Glatz New York) U S trademark No 23 629

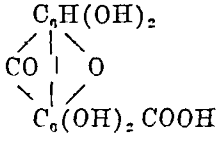
FORMIN

A name applied to Hexamethylenamina, U S P

Manufactured by E. Merck Darmstadt. (Merck & Co New York)

GALLOGEN

ELLAGIC ACID BENZOARIC ACID

Gallogen  $= C_{14}H_6O_8$ is anhydrous ellagic acid prepared from Divi-divi, the pods of *Cæsalpina coriaria,* containing more than 50 per cent of tannin

It is prepared by prolonged boiling of an aqueous extraction of divi divi, whereby the amorphous acid assumes a crystalline condition and is completely precipitated, then collecting the precipitate, washing and drying

It is a yellowish odorless tasteless powder insoluble in all acid and neutral liquids but soluble in alkaline liquids to the amount of 2 per cent., such solutions being, however very readily oxidized.

Its solutions in alkaline media give all the reactions of tannic acid with iron salts gelatin solution etc. With fuming nitric acid it gives a characteristic dark red color

It is incompatible with alkaline liquids.

Actions and Uses—Gallogen is an astringent and antidiarrheic, slowly decomposed in the intestinal tract, thus exerting its astringent action gradually during its passage

It has been recommended in dysentery, cholera infantum, diarrhea, and is said to be useful even in those of a syphilitic or tuberculous origin

Dosage—0 3 to 0 5 Gm (5 to 8 grains) for children, 0 6 to 1 Gm (10 to 15 grains) for adults, suspended in neutral or slightly acid media

Manufactured by Ad. Heinemann Eberswalde (C. Bischoff & Co New York) German patents Nos. 137 033 and 137 034

GERMICIDAL SOAP

A solid product containing 2 per cent. of mercuric iodide in combination with hard soap

It is a bluish white powder compressed into cakes It is soluble in water

Actions and Uses—It is claimed to be a disinfectant which does not coagulate albumin nor corrode steel or nickel It is stated by the manufacturers that its germicidal activity has been thoroughly tested on typhoid, cholera, diphtheria and pus germs, which it destroys within one minute

It is recommended for the disinfection of the hands and for washing out infected cavities

Dosage—Applied externally, dissolved in water A mild form is also prepared containing 1 per cent of mercuric iodide, also a soft soap containing 1 per cent of mercuric iodide

Prepared by Parke Davis & Co, Detroit Mich.

GLUTOL-Schleich

FORMALIN GELATIN

A chemical combination of gelatin and formaldehyde

It is prepared by dissolving 500 Gm of gelatin in 375 Gm of water adding 25 drops of formaldehyde solution exposing the mass so obtained, in a covered box over lime, to the vapor of formaldehyde by the aid of a layer of cotton wool saturated with it until a dry mass is produced, and reducing this to powder

It is a white odorless powder, insoluble in water under ordinary conditions, but dissolved when heated with water under pressure the solution thus produced gelatinizing on cooling It is not changed by the action of acids, alkalies or saline compounds of any reaction but is slowly decomposed in contact with living cells It may be sterilized without decomposition

Action and Uses—It is claimed that while in itself non-antiseptic, non-irritant and non-toxic, it becomes antiseptic and bactericidal in contact with living cells, in consequence of the elimination of nascent formaldehyde, which is split off very slowly but steadily

Glutol is recommended as an odorless, non-irritant, non-poisonous aseptic dressing having sustained antiseptic action for wounds, ulcers, burns, etc

Dosage—It is employed undiluted as a dusting powder, etc

Manufactured by Chemische Fabrik auf Actien vorm E Schering Berlin (Schering & Glatz New York) German patent No 104 362 U S patent No 572 205 U S. trademark No 28 431

GLYCERIN EMOLLIENT

A mixture containing Oil of gaultheria 2 Gm (30 grains) boric acid 23 Gm (¾ ounce) corn starch 88 Gm (3 ounces) glycerin 885 Gm (28½ ounces) tragacanth 17 Gm (263 grains) It is a transparent soft solid

Actions and Uses—It is intended for use as a lubricant in gynecologic and surgical practice

Dosage—It is put up in collapsible tubes and is to be applied to the dry skin After use it can be washed off in a stream of water

Prepared by Parke Davis & Co Detroit Mich

GLYCEROPHOSPHATES

GLYCERINOPHOSPHATES GLYCERYLPHOSPHATES

Glycerophosphates are the salts of glycerophosphoric acid, $H_2(CH_2OH\ CHOH\ CH_2)PO_4$, usually the two remaining hydrogen atoms of phosphoric acid are replaced by the base $Na_2(CH_2OH\ CHOH\ CH_2)PO_4$

The calcium compound is prepared by heating glycerin and phosphoric acid under certain conditions for a considerable time and then neutralizing with lime. The precipitated calcium phosphate is removed, while the calcium glycerophosphate remains in solution. From the calcium salt the other salts can be prepared by precipitating calcium by the appropriate salt of the metal whose glycerophosphate is desired Thus the addition of sodium carbonate to a solution of calcium glycerophosphate yields insoluble calcium carbonate and a solution of sodium glycerophosphate

The potassium and sodium glycerophosphates are dense syrupy liquids, exceedingly soluble in water and represent 75 per cent. of the respective salts in a dry condition The calcium iron lithium magnesium and manganese glycerophosphates are pulverulent salts, moderately soluble in water

When a solution of a glycerophosphate is tested by ammonium molybdate for the presence of a phosphate, only a slight yellow precipitate should form at once

The watery solutions of glycerophosphates decompose in a short time. They should be made from sterilized water but hot liquids should not be used for their preparation

Actions and Uses—These salts were introduced as "nerve foods" and tonics on the theory that their phosphorus, being a step nearer lecithin, is assimilated more readily than that of hypophosphites Neither the experimental nor the clinical evidence is considered conclusive by all authorities

Dosage—The potassium and sodium salts may be given hypodermically 0 2 to 0 25 Gm (3 to 4 grains) in normal saline solution, or *per os* 0 25 to 0 65 Gm (4 to 10 grains) in water or syrup The calcium, iron, lithium, magnesium and manganese salts 0 2 to 0 65 Gm (3 to 10 grains) doses, preferably in the form of tablets, the quinin salt in 0 1 to 0 33 Gm (1½ to 5 grains), and the strychnine salt in 0 001 to 0 003 Gm (1/60 to 1/20 grain) doses

GUAIACOL-SALOL

SALICYLATE OF GUAIACOL GUAIACOLIS SALICYLAS

Guaiacol-salol, $C_6H_4\ OH\ COO(C_6H_4\ OCH_3) = C_{14}H_{12}O_4$, is the salicylic ester of guaiacol, analogous to salol

It is prepared by treating a mixture of sodium salicylate and sodium guaiacolate in molecular proportions with phosphorus oxychloride washing the product of the reaction with water and crystallizing from alcohol

It is a white crystalline powder tasteless but having a salol like odor It is insoluble in water but soluble in alcohol ether and chloroform It melts at 65 C (140 F)

Being an ester it is decomposed by alkalies and alkaline carbonates with the formation of alkali salicylate and alkali guaiacolate Strong acids decompose it with the liberation of guaiacol and salicylic acid The alcoholic solution is colored wine red by the addition of ferric chloride but if the alcoholic solution be dropped into a watery solution of ferric chloride a turbidity but no coloration is produced

Actions and Dosage—This compound acts like its constituents, being antiseptic and antirheumatic It is recommended in phthisical diarrhea, dysentery, rheumatism, marasmus, chorea, etc

Dosage—1 Gm (15 grains)

Manufactured by the Fabrik von Heyden Radebeul near Dresden (Merck & Co New York)

Correction Concerning Cascara Tonic Laxative Globules—In The Journal, Sept 29 1906 page 1021 concerning Cascara Tonic Laxative Globule [illegible] that each [illegible] said to contain 0.2 gm (30 [illegible] This [illegible] Each globule is said to conta[illegible] grain)

THE JOURNAL OF THE
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[For other information see second page following reading matter]

SATURDAY, OCTOBER 6, 1906

THE AMERICAN MEDICAL DIRECTORY

Two weeks ago we considered the necessity of cooperation between the various state licensing bodies through the medium of some central body which would act solely for the good of the profession and the public It was shown that the organized profession itself is the only agency which can be expected to assume this duty and to perform this function The work to be done, as well as the advantages to be derived from it, were set forth Let us now consider one of the tangible and visible results of this work, namely, the publication of a list of the licensed physicians of the United States

A medical directory should be a list of physicians legally entitled to practice medicine It should be as complete and as accurate as it is possible to make it It should be based on information that is reliable and impartial It should treat all individuals alike, without discrimination or favoritism, and it should be published for the purpose of affording information and not primarily for commercial gain The necessity of such a directory was early recognized by the leaders of the profession Agitation along this line was begun at the first meeting of the American Medical Association [1] In 1856, a committee was appointed to arrange for the publication of a directory [2] This committee actually began preparation for its compilation Practical obstacles in the way, however, prevented the consummation of the work and the project was abandoned In 1868, Dr S D Gross, then president of the Association, emphasized the need of such a work and, in accordance with his recommendation, another committee was appointed,[3] but again it was found impracticable to undertake this work at the time

No further effort was made until 1901 In the report of the Committee on Reorganization, made at St Paul that year, one of the objects outlined to be gained by a systematic organization was the publication by the profession itself of a reliable national directory [4] As the St Paul session was the starting point of a practical organization of the profession, so also was it the starting of a new era in which practical work for practical results was to be the keynote The first effort toward the issuance of a complete national directory was the proposal to publish a Blue-Book This matter was considered by the Board of Trustees in 1903 and, in 1904, at Atlantic City it was brought before the House of Delegates and "a directory of the members of the American Medical Association and of the state associations, by states, counties, etc," was authorized [5] This book was to contain the names, addresses, etc, of members of the organization, i e, the members of the various constituent state associations and their component county branches, with membership in the American Medical Association indicated The main idea was to make this Blue-Book the beginning of what should finally be a complete national directory, including all licensed physicians

In the fall of 1904, the preliminary work on the Blue-Book was commenced, but, as the work progressed, it was realized that the labor of preparing such a book was almost as great as would be the compilation of a complete directory, since, to verify the registration, graduation, etc, of each individual member, it would be necessary to have a complete list of all licentiates and graduates Furthermore, it was realized that a Blue-Book would be incomplete except in so far as it related to the members of the organization and that it would, therefore, be practically valueless as a directory

During the following winter, the owners of the Standard Directory made a proposition to the Trustees to dispose of all their directory property to the Association Only two editions of this directory had been published, the third being then in course of preparation After considerable negotiation, the Board of Trustees, in February, 1905, obtained an option on the property, at the reduced price of $6,000 The owners of the Standard stipulated that this offer was not to be made public until the deal was closed At the Portland Session, the Board of Trustees recommended to the House of Delegates that it authorize the purchase of the Standard Directory and the publication of a general directory of the physicians of the United States, since it was possible to buy the Standard at a nominal figure and since the cost of compiling a complete directory would be comparatively little more than that of compiling the Blue-Book alone This recommendation was adopted by the House of Delegates

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[1] See proceedings of the preliminary convention 1847 resolution of Dr J L Pierce of Michigan.

[2] Transactions vol ix p 41

[3] Transactions vol xix p 35

[4] The report stated Another thing greatly needed is a reliable physicians directory or register Business houses are publishing what are called medical directories but without exception all are unreliable The best of them contain the names of pretenders, patent medicine venders horse doctors *et id genus omne* The qualifications may be given correctly if the necessary information can be gotten easily otherwise not The profession in this as in many other ways is used by commercial houses as a means for *money making and if* there is money in publishing a directory and there most certainly is the profession should have it and at the same time control it. The profession in Great Britain to a great extent at least controls the Medical Register We should control it here With such a system of registration as recommended, all information necessary for issuing a directory will always be ready without extra expense It will insure a reliable book and one that will mean something It will not be necessary to go outside of the profession for anything The printing *establishment now* owned by the American Medical Association with a little addition can get out the book. State directories can be printed, and the *same material without any change* can be used in making the national directory There will be no duplication of work. The national directories can be issued biennially or triennially and a supplement annually and also the state when called for separately and annually The matter when once set up can be left standing and corrections made as necessary The Committee believes that the publication of an official reliable directory is worthy of earnest consideration on the part of every physician — The Journal A M A., May 25 1901 p. 1451

[5] The Journal A M A. June 18 1904 p 1647

In this connection, it should be explained that the main object in purchasing the "Standard Directory" was to have a list of names as a basis to work on, not that the "Standard Directory" was to be taken as a model or that the information it contained was to be accepted as authoritative It must be appreciated that the Association could not use the Standard or any other directory in compiling its book without the permission of the owners of such a directory The right to use the "Standard Directory," even if no tangible property had been obtained with it, would have been worth much more than it actually cost The tangible property acquired was alone well worth the price paid

Active work was begun on the Directory in September, 1905 Complete copies of the records were obtained from the secretary of each state board These records have been used for the compilation of the Directory A staff of 6,000 correspondents was organized, consisting of one correspondent in each county, preferably the county secretary, and an additional correspondent in each town having ten or more physicians Lists of graduates for the last five years have been obtained from every medical college now in existence, thus supplementing a fairly complete list of graduates obtained with the "Standard Directory" It is intended, immediately after the publication of the first edition of the American Medical Directory, to verify completely all the college information in the possession of the Association, and, thereafter, to keep the records corrected from year to year

The work of compiling and editing the Directory and of comparing each state with the records of the state board has required more time than was at first estimated, as, in some cases, the records had been carelessly and incorrectly kept, and a large amount of correspondence and checking has been necessary to detect the many errors and correct the discrepancies The work of compilation, revision and correction is now practically finished and the directory is in type Each state, as completed, is being submitted in proof to the secretary of the licensing body of that state for verification, since only names of practicing physicians who are legally qualified will appear in the directory It is not expected that the first edition will be absolutely free from error Such a result would necessitate state records which were absolutely correct, correspondents who were infallible and compilers and proofreaders who were incapable of error

TOBACCO AND ARTERIOSCLEROSIS

The various studies of the causes of arteriosclerosis particularly the purely clinical studies, have been so discordant in result that a certain amount of confusion regarding the etiology of this condition exists As an example may be named the contrast between the general acceptance of the major rôle played by alcohol in the etiology of this disease, and the conclusions reached by Cabot in his study of the subject showing that alcohol, *per se,* had apparently little effect There are a number of factors connected with the subject which render judgment of great difficulty The variation in vulnerability of the vessels in different people is of great importance, as is the fact that in the complex conditions of modern life man is subjected to the action of a variety of poisons, either produced by himself or wilfully or unknowingly introduced from without. While it may be safe to assume that a single substance, like alcohol, does not of itself lead to arteriosclerosis, it is by no means safe to conclude that it may not be a potent factor acting in conjunction with other poisons

Aside from alcohol, one of the most commonly used poisonous substances is tobacco Its active principle, nicotin, has long been known to be one of the most deadly of poisons, and, though it is present in almost infinitesimal quantities in tobacco smoke, smokers themselves would probably be the last to deny that it may produce very appreciable physiologic action As a possible source of damage to the arteries, tobacco has been under suspicion for some time and, clinically at any rate, its connection with some forms of vascular disease, such as intermittent claudication, seems fairly well established The investigations of Adler, made some years ago, in which tobacco infusion was administered to animals *per os,* did not seem to bear out clinical results, and the more recent experiments of Josué, who used intravenous introduction, were also negative Adler and Hensel,[1] working without knowledge of Josué's failure, have reached definite results from the intravenous injection of pure nicotin Briefly stated, those results are the production in rabbits of a form of arterial degeneration similar to that produced by adrenalin It is to be noted that not only arteriosclerosis, but also actual aneurisms were produced These lesions, and the adrenalin lesions, are not, it must be confessed, exactly comparable to those of human arteriosclerosis, and there are those who have argued that the conditions are in no way comparable This, we think is an extreme view and does not take into account the natural differences in reaction to a given reagent which the tissues of different animals show

While the discussion of the pros and cons of this question is out of place here it is fair to assume we think that nicotin is capable of setting up arterial changes in man The exact rôle of tobacco in the production of arteriosclerosis of course can only be conjectured

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[1] Jour of Med Research 1906 vol xv p 229

PREVENTION OF EPIDEMIC CEREBROSPINAL MENINGITIS

Reference has been made several times recently in these columns to the genesis and the prevention of epidemic cerebrospinal meningitis. The exact mode of spreading of this disease was not understood satisfactorily until Goodwin and others demonstrated the frequency with which the meningococci occur in the nose and throat of healthy persons who come into contact with the sick. While the cocci die out quickly when deposited on clothing and other articles, they persist in the throat and nose as on a favorable culture medium. It appears that in persons who carry meningococci in this way no symptoms may be produced at all or at most, only local catarrhal disturbances.

It is easy to understand how carriers of meningococci must be a source of great danger to individuals readily susceptible to meningeal infection and to whom the organisms may be transferred either by contact or by droplets of moisture expelled in coughing, sneezing, speaking, etc. In order to minimize this danger so far as possible, Ostermann[1] suggests that the public should be informed of the mode of spreading and asked to observe certain precautions for at least three weeks after individual contact with a case of meningitis, among which may be mentioned the following: Close contact, kissing, the use of common utensils for eating and drinking, and the mingling with crowds, e. g., on street cars, should be avoided. In speaking and coughing one should keep at least an arm's length from other persons, and discharges from the mouth and nose should be deposited preferably on rags or paper handkerchiefs that may be burned; if handkerchiefs are used they, as well as other infected clothing, should be boiled for at least ten minutes or soaked in some standard germicidal solution.

These precautionary measures have the approval of Flugge, and they seem to be reasonable and practicable. The rapidity with which meningococci die out as they leave the human body render extensive disinfection of rooms, etc., occupied by the sick superfluous, and it is the meningococcus carrier that must be rendered as nearly harmless as possible. Plainly the number of possible carriers should be reduced to an absolute minimum by promptly limiting to the greatest extent possible the number of persons that come into contact with the sick or with those that care for the sick. Hence isolation, preferably in hospital, is clearly indicated. Physicians and nurses should bear in mind the danger of themselves becoming meningococcus carriers and thus conveying the disease further, and it would seem advisable for them to wear protective masks over the mouth and nose while in close contact with the sick. Finally now that the mode of spreading of epidemic meningitis appears to be understood better than ever before, health officials, as well as physicians in general, must not delay to assume the responsibility for the prompt enforcement of the precautionary measures that so obviously are indicated.

EXPERIMENTAL DIABETES

The experimental production of glycosuria may be brought about in several ways, the most prominent being by extirpation of the pancreas and the puncture of a certain point in the floor of the fourth ventricle discovered by Claude Bernard. Besides these methods, glycosuria may be brought about by the action of various poisons. Some of these poisons, e. g., phloridzin, while producing glycosuria, do not increase the amount of sugar in the blood, but rather diminish it, and they are supposed to act by injuring the kidney so that its power to hold back the sugar in the blood is destroyed and the blood is drained of sugar. As this process does not conform to the phenomena of diabetes the result of these poisons can not be considered as experimental diabetes, and is of minor interest to the practitioner aside from the use of phloridzin in testing kidney function.

Other poisons, e. g., piperidin, adrenalin, carbon monoxid, chloroform, etc., temporarily, at least, may produce a disturbance of sugar metabolism, apparently very similar to that which occurs in diabetes. There is hyperglycemia and consequent glycosuria. Some of these substances have been shown by Herter to act very energetically when applied locally to the abdominal organs, especially the pancreas. The first explanation of this fact was that a disturbance of pancreatic function was directly brought about by injury to the organ or by the reducing action of the substances applied. F. P. Underhill,[1] however, brings forward evidence to show that the influence of these drugs is not local nor to be explained by direct influence on any particular organ, as the pancreas, but is probably due to the dyspnea which they cause. "Dyspnea, however induced, calls forth a marked hyperglycemia and glycosuria without the intervention of any drugs; the typical rise in the sugar content of the blood produced by piperidin fails to appear when oxygen is administered. It is likely, therefore, that this experimental diabetes involves defective oxidation of carbohydrate material. Hyperglycemia is the constant factor, and glycosuria follows whenever there is a sufficient accumulation of carbohydrates in the blood."

The considerations presented are inadequate to explain the phenomena of adrenalin diabetes. The administration of oxygen after painting the pancreas with adrenalin did not prevent the hyperglycemia and glycosuria. The action of this substance appears to be unique

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[1] Deut. med. Wochenschr., 1906, xxxii, No. 11.

[1] Jour. of Biologic Chemistry, vol. i., No. 1, Oct., 1905.

THE VIABILITY OF THE TYPHOID BACILLUS IN WATER.

While it is generally conceded that, under ordinary circumstances, typhoid fever is most commonly transmitted by water, our knowledge of the life history of the germ in this medium is far from complete So far as ice is concerned, the matter of the viability of the germ has been pretty well tested, and it is now generally conceded that, except under very unusual circumstances, the danger from this source is practically *nil* It has generally been assumed that in water under normal circumstances the bacillus of typhoid fever disappears rather rapidly, partly as the result of physical agencies like light and sedimentation, and partly as the result of the antagonism of the saprophytes with which it is associated This is, no doubt, partly true, but the recent work of Wheeler[1] shows that it is not entirely true For example, Wheeler found that in well water with considerable organic pollution, at room temperature, and with the exclusion of light, a considerable increase in the number of typhoid bacilli took place It is in wells that such conditions of contamination and exclusion of temperature might be found Wheeler also showed that not all saprophytes are antagonistic to typhoid bacillus, one was observed which grew symbiotically with it, both organisms increasing in number These facts should be borne in mind in investigating the sources of typhoid epidemics

ETHER DAY

The student of medicine in the United States, in a short-sighted endeavor to have his valuable time all count for what he considers "practical," is prone to slight the historical side of medicine Some of our medical faculties are endeavoring to give their students at least a taste of medical history, but there are other means of emphasizing historical dates, for example, ceremonies commemorating events of either local, state or national importance Such a contribution to the education of the student and physician is "Ether Day," which will be celebrated October 16 at the Massachusetts General Hospital. This day will be the sixtieth anniversary of the performance of the first operation under ether at that hospital This historic event was duly commemorated ten years ago on the occasion of the semicentennial celebration of the introduction of surgical anesthesia, and since that occasion the hospital authorities have undertaken to establish the custom of keeping "Ether Day" each year, to remind the young physicians and nurses of the hospital of its most sacred tradition It would not be amiss for other hospitals, colleges or societies to establish some such custom so that the memory of America's great contributions to medicine will not grow dim to the coming generation There are abundant opportunities for such events if we will but look about us, and these commemorations will not only contribute to historical knowledge, but to the general *esprit de corps* of the profession

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[1] Jour of Med. Research 1906 vol xv p 269

Medical News

GEORGIA.

Medical College Opens—The Atlanta College of Physicians and Surgeons opened for its fifty second annual session, October 1 The exercises were held in the new building, which, when completed, will have cost about $100 000

Personal.—Dr T O Powell, superintendent of the Georgia State Sanitarium, Milledgeville, is reported to be critically ill. ——Dr Percy L. Jones, Cedartown, now on duty at Fort Preble, Maine, will leave for Europe January 1 ——Dr William A. Jackson, Atlanta, a member of the Governor's Horse Guard, while on his way to the armory for duty, September 20, was assaulted by negroes He was removed to a sanitarium and is reported to be improving

Pasteur Institute Report.—The board of governors of the Pasteur Institute and Laboratory of Georgia, Atlanta, held its sixth annual meeting October 6 During the year 471 patients were treated, with only 2 deaths Three patients developed the disease after treatment had been begun and died with hydrophobia The following officers were elected for the ensuing year President, Dr Henry R. Slack, Atlanta, vice president, Dr James H McDuffie, Columbus, physician in charge, Dr Charles N Brawner, Atlanta, assistant Dr Edward C Cartledge, Atlanta, and pathologist, Dr Claude A Smith, Atlanta

ILLINOIS

Children Must be Vaccinated—To prevent further spread of smallpox, Dr Robert C J Meyer, commissioner of health of Moline, has ordered that those pupils of the Garfield school who can not show certificates of examination must be vaccinated

Diphtheria—The board of education of Marseilles has ordered the schools of that city to be closed for an indefinite period on account of diphtheria Sunday school meetings and other gatherings have been prohibited, and a strict quarantine has been established at the infected points

Will Not Permit Names in Paper—At a regular meeting of the Decatur Medical Society, September 25, it was decided that the names of members should not be mentioned in connection with medical matters in the daily press and that, if such notice should appear, the physician in question would be requested to explain at the next meeting of the society

Epileptics' Home.—Dr George A Zeller, superintendent of the Illinois Hospital for the Incurable Insane, Bartonville, in a paper to be read before the State Conference of Charities, recommends the transformation of the Soldiers Orphans' Home at Normal into a hospital for epileptics There are, he says, 6,000 epileptics in the state, of these 1 400 now receive aid in some form, and the need for such an institution is urgent

Conference of Charities—The eleventh annual State Conference of Charities will be held in Chicago, October 24 25 and 26 The meeting of October 24 will be held in the Sherman House, that of October 25 at Hull House, and the evening conference at Chicago Commons The morning session of October 26 will be held at the Abraham Lincoln Center, Oakwood Boulevard and Langley Avenue, and the afternoon conference at the South Park Club house

Chicago

Deaths of the Week—For the week ended October 6, 566 deaths were reported, equivalent to an annual mortality of 14 40 per 1,000 The deaths numbered 28 more than for the preceding week, and 94 more than for the corresponding week of 1905 Acute intestinal diseases still lead the death causes with 103 deaths, followed by heart disease with 61 consumption, with 55 violence, including suicide with 40, and nephritis, with 27 The principal increases in death causes were from heart disease and pneumonia

September Mortality—During September 2,327 deaths were reported equivalent to an annual mortality rate of 13 81 per 1 000 During the previous month there were 2 187 deaths reported, and during September 1905 2 101 equivalent to annual mortality rates of 14 29 and 12 81 per 1 000 respectively Of the decedents 598 were under one year of age and 401 over 60 years of age The chief causes of death were Acute intestinal diseases 470 consumption 243 Bright's disease 180 violence and heart disease each 161 and pneumonia 172

Personal—Dr Anders Doe, one of the delegates of the Norwegian National League at the coronation of the King of Norway, has returned after an absence of [illegible]

Arnold P Gilmore is reported as being seriously ill with nephritis ——Dr Sarah Hackett Stevenson, who was stricken with paralysis two years ago has been taken to St Elizabeth's Hospital ——Dr Alfred Schalek has been appointed professor of dermatology and genitourinary diseases in the Medical College of the University of Nebraska, Omaha, and has moved to that city

Wertheim in Chicago—Dr Ernst Wertheim, professor of gynecology in the University of Vienna, is spending a week in Chicago as the guest of the Chicago Gynecological Society, and has given clinics at the Postgraduate Hospital and the Presbyterian Hospital He has been entertained by Dr Gustav Kolischer at a dinner at the Chicago Beach Hotel and by Dr Franklin H Martin at a luncheon at the Union League Club, and a banquet was given in his honor, October 10 by the Chicago Gynecological Society, at the close of which the guest of honor read a paper before the Chicago Medical Society on "Radical Abdominal Operation in Carcinoma of the Cervix Uteri"

INDIANA.

City Death Rates—The report of the State Board of Health for August shows the following annual death rates per 1,000 for Indiana cities Terre Haute, 23 4, South Bend, 20 3, Indianapolis, 16 7, Fort Wayne, 15 4, and Evansville, 15 3

Hospital News.—The contract for building the Good Samaritan Hospital, Vincennes, has been let for $24,300, the building to be completed on or before July 20 next ——N O Nelson, St Louis, has purchased a residence and six acres of ground at Dublin, on which he will establish a home and sanatorium —— It is the intention of the Sisters of St Francis to build a hospital at Logansport with a capacity of 100 patients, and to cost between $60,000 and $70 000 ——The city council of Richmond has appropriated $6,000 toward the maintenance of the Reid Memorial Hospital

Test Case to be Made—As a first step toward testing the legal rights of the Indianapolis board of health to make a contract with the Indiana Medical College, the School of Medicine of Purdue University, for the exclusive privilege of holding clinics at the Indianapolis City Hospital, Drs Horace R Allen and Frank F Hutchins on September 27 made formal demand on Dr Norman E Jobse, superintendent of the hospital, for the privilege of admitting students of the new State College of Physicians and Surgeons to the hospital and of lecturing to them there The demand was denied by Dr Jobse

Personal—Dr Lawson E Bracken, Greenfield, has been appointed secretary of the local board of health, vice the late Dr Frank W Selman ——Dr Henry O Wells, Fort Wayne, has been made medical director and medical manager of the Koonse sanitarium ——Dr R B Brown New Albany, has been appointed interne in the Illinois Central Hospital, Paducah, Ky ——Dr and Mrs Joseph C McClurkin, Evansville, have returned from Europe ——Dr Lindsey L Whitesides Franklin, is reported to be critically ill in Los Angeles ——Dr Rebecca Parish, Logansport, has left for Seattle, whence she sails, October 11, for Manila, to take charge of the free dispensary of the Methodist Episcopal church there

Communicable Diseases—The South Bend board of health has been given full power and authority to use every means available to stamp out smallpox in the city, the occasion of this action being the appearance of a case of the disease —— As a result of analyses of water drawn from three public wells in Mitchell, typhoid germs have been found in two More than 20 cases of typhoid fever have been officially reported to the local board of health ——On account of the prevalence of diphtheria in Marion, all of the schools south of Eighteenth Street were ordered closed September 20 for an indefinite period Church services and all public gatherings in the territory were also interdicted ——School No 8 and the Mississinewa school, in Center Township, and School No 2 Fairmount, Grant Township, have been closed on account of diphtheria ——Several cases of smallpox are reported in Brazil

Brother Uses Certificate—Dr George L Dickerson, Terre Haute, has been summoned, it is reported, to appear before the Indiana Board of Medical Registration and Examination to show cause why his license should not be revoked It is alleged that he lent his diploma and certificate to his brother, Robert J Dickerson, who resembles him closely in dress and appearance for the purpose of assisting him in the fraudulent practice of medicine in Logansport R J Dickerson was fined $5 and costs in the Cass County Circuit Court recently for practicing medicine without a license the prosecution being instituted by the Cass County Medical Society Dr Dickerson replies to the charge stating that he and his brother took advantage of the state law which permits an undergraduate medical student to practice medicine under the immediate direction and supervision of a regular practitioner, and denies that any fraud was intended

LOUISIANA

Hospital Site Purchased.—The Sisters of the Incarnate Word of Galveston have purchased four acres of land at Lake Charles, on which a hospital to cost $30,000 will be erected

State Board in Its New Home—The State Board of Health has moved to its new offices in the Hibernian building, New Orleans The suite consists of five rooms, including separate offices for the president and secretary of the board

Low Mortality—The low mortality of New Orleans for the week ended September 22 is the lowest on record of the city, being equivalent to an annual rate of 13 89 per 1,000 for the entire population, or 11 25 per 1,000 for the whites

Want Medical College—At a meeting of the physicians of Shreveport, September 20, a committee was appointed to devise means for raising $30,000, to be used in the erection of a building for a medical branch of the Louisiana State University, Baton Rouge The endeavor is to have the medical college established in connection with the State Charity Hospital, Shreveport

New Health Board Takes Charge—The New Orleans city board of health, consisting of Drs William T O'Reilly, William H Robin, William A Gillaspie, Oliver F Ernst and Mr A T Wainwright, assumed charge of health affairs September 11 The new board elected Dr O'Reilly chairman and health officer, and Dr Sidney L Theard, secretary treasurer and sanitary officer

Quarantine Fees Reduced—The State Board of Health, at its meeting September 11, made important changes in the quarantine regulations, reducing the cost of the inspection and fumigation service at quarantine stations The new schedule of fees reduces the former inspection fees 33 1/3 per cent and the fumigation fees 14 per cent., as compared with the charges now in force

New Iberia Free.—The president of the State Board of Health on September 5 declared New Iberia free from yellow fever, 20 days having passed since the first and only case was discovered, without the development of any other infection Under the direction of President Irion, every store and public dwelling in the place has been fumigated The citizens of New Iberia presented President Irion and his assistant, Dr Mayer, with umbrellas in testimony of the appreciation of the work

Tuberculosis and Smallpox.—The State Board of Health has sent circulars to each of the 1,535 practicing physicians in Louisiana and to the various parish health officers, asking their coöperation in checking what is termed "an alarming increase of tuberculosis" and an "alarming prevalence of variola," and enclosing blanks for statistics on these points The law making it a punishable offense for a physician to fail to report the statistics of births and deaths to the health officers of his parish, which was enacted in 1900, has never been systematically enforced

MAINE

Back to Panama.—Dr Ernest Wheeler, Augusta, who has been visiting at his old home in Maine, has left for New York en route to Colon, Panama, to resume his work there

Timely Bulletin.—The State Board of Health of Maine has issued a circular on "Typhoid Fever, Its Prevention and Restriction," and "Formaldehyd Disinfection a New Process" In the latter it advocates the use of formaldehyd and permanganate of potash, as recommended by the Illinois State Board of Health.

Briggs Sentenced—Dr William H H Briggs Bangor, who was arrested March 2 for manslaughter charged with having performed a criminal operation, pleaded not guilty, and was released under $2,000 bonds, is reported to have been found guilty of manslaughter by a jury at Bangor September 3, and sentenced to serve three years at hard labor in the state penitentiary

Military Surgeons Organize.—At the suggestion of Major Edwin M Fuller, Bath, the Association of Military Surgeons of the State of Maine was organized at Augusta, August 16 with the object of mutual improvement of its members and keeping them in touch with the medical departments of the national guards of other states and with the regular establishment The following officers were elected President, Major Edwin M Fuller, Bath, vice president, Col James B

O'Neill, Portland, secretary and treasurer, Lieut (j g) George H Turner Jr, Portland, and executive committee, the president, Capt Gilbert M Elliott, Brunswick, J Frederick Hill Waterville It is planned to hold two meetings each year, one in the summer while the regiments are in camp, and the other in midwinter at some central point

MARYLAND

Public School Closed—The public school of East Newmarket has been closed by the health officer on account of the death of one pupil from diphtheria

County Society Meeting—The Allegany County Medical Society held its annual meeting at Cumberland, October 2 The following officers were elected President, Dr S A Boucher, Barton, vice president, Dr George L Broadup, Cumberland, secretary, Dr William R Faard, Cumberland, treasurer, Dr E B Claybrook, Cumberland, and censor, Dr Emmett L Jones Cumberland The next annual meeting will be held at Frostburg

State Sanatorium—Dr H Warren Buckler, Baltimore has gone to Western Maryland to seek a site for a sanatorium for consumptives to be built and maintained by the state At least 100 acres will be required, at an elevation of 1 500 feet, with abundant water supply The plan proposed is for an administration building, a dining room to accommodate 100 to 150 patients, a kitchen with sleeping rooms above it for employés, and separate pavilions for the patients, the whole to cost from $80,000 to $85,000

Baltimore

Had Tonsils Removed—Dr Lewellys F Barker returned from Massachusetts October 2 While he was in the North he had his tonsils removed

Book Presentation.—William A Marburg, Baltimore, on the suggestion of Dr William Osler, has presented Johns Hopkins Medical School with a valuable collection of medical books, many of which are rare specimens

Section Officers.—At a meeting of the section on clinical medicine and surgery of the Medical and Chirurgical Faculty of Maryland, October 5, Dr C Urban Smith was elected chairman, and Dr Harvey G Beck, secretary

Herter Foundation Lectures—The third course of lectures on the Herter foundation was delivered by Sir Almroth E Wright M D, F R S, late professor of pathology in the Army Medical School, Netley, and pathologist to the St Mary's Hospital London The subject of the lecture was "The Therapeutic Inoculation of Bacterial Vaccines and Its Application in Connection with Bacterial Disease"

Personal—Dr George W Mitchell has returned from Europe—Dr J Albert Chatard has returned from abroad——Dr J Hall Pleasants has returned after several months abroad He has recovered from his attack of typhoid fever——Dr Robert E Coker has resigned the Adam T Bruce fellowship in biology in Johns Hopkins University, having been appointed by the Peruvian government to take charge of the work in connection with the marine fisheries in Peru——Dr Frank J Kirby is ill with scarlet fever

MASSACHUSETTS

Typhoid Fever at Everitt—An epidemic of typhoid fever at Everitt is giving the city and state boards of health considerable anxiety Within the past two weeks 31 cases have been reported, with 3 deaths The disease is confined to the territory lying north of Ferry Street or Glendale Square

Crusade Against Uncleanness—The Massachusetts Board of Health, after finishing its active crusade against unclean dairies, foul icecream manufactories and unfit meat supplies in the various cities and towns of the state has entered on a study of the bakeries and found 247 "distinctly bad" 235 "not especially bad," 41 "satisfactory," and only 13 "worthy of special commendation"

Nurses Demonstrate Work—The graduation of a class of six from the Training School for Nurses of the Boston Children's Hospital was made the occasion of a novel demonstration of their work at Jordan Hall The demonstration included giving a bath to a patient preparation for an operation, application of various splints and bandages and the proper method of preparing an infant's food

Personal—Dr C Clarke Towle has been appointed city physician of Somerville vice Dr Alvah B Dearborn, deceased——Dr John H Bannon Lawrence has resigned as a member of the school board and as one of the ward physicians of that city to accept a position as school physician——Dr David Wagner, Springfield, is recovering from an operation for appendicitis, performed September 22.

Ether Day—The sixtieth anniversary of the performance of the first operation under ether will be celebrated at the Massachusetts General Hospital October 16 This historic event is editorially referred to in this issue The hospital authorities have undertaken to keep "Ether Day" on October 16 every year The exercises at the hospital on Tuesday next will consist of a few reminiscent remarks in the old amphitheater by one of the staff It is hoped also that one of the physicians who witnessed the first operation in 1846 will be present.

Medical Inspectors Appointed—The following 15 physicians have been appointed by the board of health of Worcester for medical inspectors in the public schools Drs Philip H Cook S Alphonse Daudelin, George E Deering William E Denning, George E Emery, Timothy J Foley William E Langlois Edwin R Leib, Merrick Lincoln Arthur W Marsh Thomas F Kenny, John McGillicuddy, George F O'Day Charles B Stevens and George O Ward——Drs Dennis M Ryan, Worthington W Miner, George F A. Spencer and Adolphe A. Auger have been appointed school physicians for Ware

Councilors' Meeting—The fall meeting of the council of the Massachusetts Medical Society was held October 3 Dr George W Gay, Boston, president, in the chair The secretary Dr Francis W Goss, Roxbury reported that 243 fellows had been admitted during the past year and 41 members had deceased Delegates were appointed to the state medical societies of Pennsylvania, New York and Rhode Island As requested by the American Medical Association, the following committee of three was appointed to act with the Council on Medical Education of that Association Drs George A Sears, Harold C Ernst and Horace D Arnold, all of Boston The committee was instructed to act in connection with the American Medical Association, the Massachusetts Medical Society and the State Board of Registration and Medicine A committee of five, of which Dr Edwin B Harvey of Westboro, secretary of the Massachusetts Board of Registration and Medicine is chairman, was appointed to revise the by laws of the society to conform to the latest medical practice and to report at the February meeting By unanimous consent, Dr Beverly MacMonagle San Francisco, was elected an honorary member of the society

Health Report—The annual report of the Boston board of health for 1905 1906 shows a death rate of 18 49 per 1 000 Of the 11 007 deaths infectious diseases caused 2 161 diphtheria, 132, scarlet fever 44 typhoid fever 117, measles, 51 and consumption 1,224 The deaths of children under 5 numbered 3 024, 81 less than the previous year Nearly 15 000 nuisances were investigated and abated The medical inspectors of schools examined 16 961 pupils and detected 312 infectious diseases, 1,342 oral and respiratory diseases 140 diseases of the ear 053 of the eye 4 390 of the skin and 3 501 cases of miscellaneous disease A table of mortality statistics for consumption diphtheria typhoid fever and scarlet fever, beginning with 1810 shows that in the last 30 years the rate of deaths per 10 000 of population has decreased for consumption from 36 65 to 20 56 for diphtheria from 20 81 to 2 22 and for typhoid fever from 4 19 to 1 90 The mortality of scarlet fever too has greatly decreased but the fact most strikingly brought out by the table in regard to this disease are cycles of seven to nine years There is therefore strong probability that within the next year or two this disease will again be much more frequent for another increase is due

MICHIGAN

Will Prosecute Illegal Practitioners—The State Board of Registration is about to take active measures to prosecute physicians who are practicing without being registered and others legally registered but who are guilty of unprofessional conduct

Bust Presented—The University of Michigan has been presented with a bust of the late Dr Pitcher a member of the first board of registration from 1837 to 1852 professor emeritus of the institutes of medicine and obstetrics from 18[illegible] to 1872 Dr Pitcher was also mayor of Detroit from 1840 to 1842 The bust will be placed in the new medical buildin

Epidemic Diseases—Three Oaks is reported to be suffering from an epidemic of typhoid fever——Rapid City re[illegible] cases of diphtheria with 2 deaths The sch[illegible] public meeting have been closed——Croton [illegible] is reported to be suffering from a severe [illegible] fever——Typhoid fever is reported to be [illegible] Kalamazoo

Dr. Robert Bell's Library

August Mortality—During August 3,237 deaths were reported in the state, equivalent to an annual death rate of 14 3 per 1,000 The total deaths were 458 more than July, and 440 more than August, 1905 Of the decedents, 868 were infants under one year of age, 329 children between 1 and 4 years of age, and 772 individuals 65 years of age and over The important causes of death were Diarrheal diseases, 548, violence, 266, tuberculosis, 224, cancer, 150, pneumonia, 63, typhoid fever, 45, whooping cough, 43, meningitis, 40, diphtheria, 29, scarlet fever, 12, and measles, 8

Hospital News.—Plans are being prepared for the addition to the General Hospital, Sault Ste Marie, that will almost double its capacity It now has accommodation for about 70 patients ——The proposed hospital for Ludington now seems to be assured The association which has its establishment in charge is known as the Mason Hospital Association, with membership dues of $5 annually Several sites have been suggested, but no decision as to the location has yet been made ——The Benton Harbor hospital committee met October 1 to award the contract for the erection of the new hospital

Personal.—Dr Guy M Dunning, Lansing, and Dr Raymond D Sleight, Battle Creek, start for Vienna, October 16 ——Dr Arthur W Scidmore, Three Rivers, is reported to be seriously ill ——Dr Mortimer Willson, Port Huron, was thrown from his buggy September 11, and sustained severe cuts of the face and hands ——Dr Orson Millard, Flint, has been elected president of the medical section of the National Fraternal Congress ——Dr Leon M. Gillette, Battle Creek, is reported to be seriously ill at his home ——Dr George P McNaughton, Sault Ste Marie, has resigned as health officer and Dr A Harvey Miller has been appointed in his stead ——Dr Peter J Livingston, Caro, was tendered a banquet by the Caro St Andrew's Society, September 25 Dr Livingston is about to leave Caro and locate in Detroit

Dr McCormack's Meetings in Michigan—The council of the Michigan State Medical Society has arranged a series of 30 meetings throughout the state, at which Dr J N McCormack of Bowling Green, Ky, will make addresses Dr C B Stockwell, president of the society, has sent out a letter, from which we quote

> Dr McCormack has made a similar itinerary in a number of other states speaking before audiences composed of both the profession and the laity He is endeavoring to make plain to the people that an underpaid profession is as much to their disadvantage as to the doctors He discusses the evils of drug store prescribing the 'patent medicine evil venereal prophylaxis, sanitary questions etc He shows the laity that the profession has no interest that at the same time is not the interest of the public Dr McCormack is a splendid speaker, and has that happy personality which at once assures interest and attention.
>
> Will you not make a special effort both to attend one or more of these meetings and also to urge the influential people of your clientele to be present? The attendance of the ladies is especially desired. Impress on them that it is not an ordinary medical meeting

The arrangements for the meetings are as follows

Detroit Monday October 15 Public meeting in Museum of Art 8 15 p m

Ann Arbor Tuesday October 16 Meeting for Physicians, New Medical Building 3 p m. Public meeting Sarah Caswell Angell Hall 8 p m

Jackson Wednesday October 17 Meeting for Profession Unitarian Church, 2 30 p m Public meeting Unitarian Church 7 30 p m

Lansing, Thursday October 18 Meeting for Profession City Hall 2 30 p m. Public meeting City Hall 8 p m

Charlotte Friday October 19 Meeting for Profession, Court House 4 p m. Public meeting Court House 7 30 p m

Battle Creek Saturday October 20 Meeting for Profession, Knights of Columbus Hall, 3 p m. Public meeting Congregational Church 8 p m

Kalamazoo, Monday October 22 Meeting for Profession Academy of Medicine Rooms Public Library 2 p m Public meeting in evening time and place to be announced

Benton Harbor Tuesday, October 23 Public meeting Armory 7 30 p m

Holland, Wednesday, October 24 Ottawa County Society meeting in afternoon to which all physicians are invited. Public meeting in Winant Chapel Hope College 7 30 p m

Grand Rapids Thursday October 25 Public meeting in Auditorium Ryerson Library 8 p m.

Greenville Friday October 26 Eleventh District meeting at 10 30 and 1 30 p m Scientific program and an address by Dr McCormack. All physicians are invited. Public meeting Congregational Church 8 p m

Big Rapids Saturday October 27 Public meeting Court House 7 30 p m

Cadillac, Monday, October 29 Arrangements pending Due notice will be given.

Upper Peninsula Tuesday October 30 to Thursday November 1 inclusive. The arrangements are being made and due notice will be given of the places and hours

Bay City Friday November 2 Public evening meeting under the auspices of the Bay County Society Time and place to be announced.

Saginaw Saturday November 3 Meeting for Profession City Hall 3 30 p m Public meeting City Hall 8 p m

Alma Monday November 5 Public meeting Alma Sanitarium 3 30 p m

Flint Tuesday November 6 Sixth District meeting at Dryden Hall Scientific program with an address by Dr McCormack. This will be followed by a dinner All physicians are invited Public meeting Stone's Opera House, 8 p m

St Johns Wednesday, November 7 Arrangements pending Due notice will be given

Lapeer, Thursday, November 8 Public meeting Opera House, 8 p m

Port Huron Friday November 9 Meeting of the Seventh District Society with public meeting in the evening Due notice of the arrangements will be given.

Adrian Saturday, November 10 Public meeting, Baptist Church, 8 p m

NEBRASKA.

Diphtheria—Diphtheria is said to be present in Beatrice in malignant form A number of cases are under quarantine and several deaths have occurred

Alumni Banquet.—The Medical Alumni of the University of Nebraska held their fourth annual banquet in Omaha, September 18 Dr Matthew G Tinley, Council Bluffs, presided as toastmaster

Personal.—Dr S N Richardson is reported to be seriously ill at Elgin, Neb ——The board of councilors of the Nebraska State Medical Association has elected Dr Francis A Long, Madison, president, vice Dr James L Greene, removed from the state

Hospital News.—By the will of the late Edward Rosewater, Omaha, a bequest is made to the Wise Memorial Hospital ——Drs Simon C Beede and Harry E Burdick are erecting a hospital at David City to accommodate 20 patients ——A new cottage at the Norfolk Hospital for the Insane has been completed and accepted by the authorities

NEW YORK.

New York City

Hawthorn Cancer Home—This institution, devoted to the care of the cancerous poor, has been given a building for the entertainment of visitors and guests by George H. F Schrader

Coroners Busy—There were 532 deaths reported to the coroners during September Of these 334 could be accounted for by natural causes, 60 were due to falling timbers, 41 were homicides and 26 suicides

Personal.—Dr William S Bainbridge arrived home on the *Campania* October 5 ——Dr William J Burns of Sea Cliff, Long Island, was thrown from his automobile when it skidded and struck a telegraph pole

New Strauss Milk Laboratory—The plans have been filed for a new laboratory building which is to be erected on East Thirtieth Street The building will be 35 feet front and 85 feet deep and will cost $30,000

Typhoid Among Bellevue Staff—It is reported that three members of the house staff of this hospital are ill with typhoid fever contracted from attending the unusually large number of typhoid patients in the hospital at present

For Hebrew Charities.—The late Adolph Herrmann has bequeathed $5,000 to Mount Sinai Hospital, $2,500 to the Montefiore Home, $1,000 to the Hebrew Orphan Asylum, and $500 to the Mount Sinai Hospital Training School for Nurses

Hospital Officers Elected—At the annual meeting of the Long Island Throat Hospital and Eye Infirmary, Brooklyn, Dr Charles T Schondelmeier was re elected president The report of the treasurer showed a balance in the treasury of $680

Dairies Will be Inspected.—Health Commissioner Darlington has begun a tour of inspection among the creameries of this state After a similar trip last year milk from insanitary dairies was seized by the inspectors, and it is believed that this trip will be followed by still further improvement

Decreased Registration at Columbia—The College of Physicians and Surgeons of Columbia University shows a decrease in the number of students for the present year Last year there were 405 registrations as against 331 for this year This decrease is accounted for by the fact that the entrance requirements have been made more difficult

Museum of Surgical Instruments—At the regular meeting of the Academy of Medicine, October 4, Dr D Bryson Delavan presented to the academy a historical collection of laryngologic instruments to which he said he expected to add from time to time It is hoped that this gift will be the nucleus for a collection of instruments in all fields of surgery, and it was shown that such a museum would be highly useful to the profession

Contagious Diseases—There were reported to the sanitary bureau for the week ended September 29, 367 cases of tuber culosis, with 151 deaths, 137 cases of diphtheria, with 12 deaths, 114 cases of typhoid fever, with 19 deaths, 61 cases of measles, with 5 deaths, 41 cases of scarlet fever, with 3 deaths, 35 cases of whooping cough, with 8 deaths, 15 cases of cerebrospinal meningitis, with 12 deaths, 12 cases of varicella and 1 case of smallpox, a total of 783 cases, with 210 deaths

Illiterates in Rockland County—According to the state educational departments report there are 2 019 illiterates in Rockland County's population of 30,638 Of the 11,866 voters 1,129 are illiterates Among the native whites there are 350, among the native whites of foreign parents, 81, and among the foreign born whites, 1,272

NORTH CAROLINA.

New Hospital—Mercy Hospital, Charlotte, has been incorporated under Roman Catholic auspices The hospital is to be large and elaborately appointed

Diphtheria.—A severe type of diphtheria is reported to be prevalent in Lenoir County A joint meeting of the authorities and the medical officers of Kinston was held September 21 to institute systematic measures against the spread of the disease

Honor System Established.—Wake Forest College has instituted the "honor system" as the disciplinary method of the college in the future F L Wilson, Yancey County, represents the medical department of the college on the committee of administration.

Personal—Dr A J Crowell, Charlotte, professor of rectal diseases in the Medical College of North Carolina has recently been tendered and declined a chair in a Texas medical college ——Dr John A Williams, formerly of Reedsville, has removed to Greensboro

In Sanitarium—Dr Joseph B Matthews, Greensboro, who was convicted of the murder of his wife in December last and sentenced to 20 years in the penitentiary, is undergoing treatment in a sanitarium at Baltimore for the cure of the drug habit, which was claimed to have been the cause of the murder Thus far there has been no official notice of the revocation of his license by the state board

Congressional Contest.—The physicians of the state are taking much interest in the campaign for congress in the ninth district One candidate is the Hon E Yates Webb, who seeks re election Mr Webb is the author of the pure drug bill introduced in the last session of Congress After the bill had been defeated, at the last moment, he secured its insertion as a section of the pure food measure, which later became a law His opponent is Dr Frank Roberts, Marshall.

Pure Drug Bill—It is proposed to enact as a state law the pure drug bill, introduced by Congressman Webb At present the pure food law only restricts the "patent medicine" manufacturers outside the state from shipping goods into the state unless the labels show in detail the percentage of morphin, alcohol, etc It is apparent, however, that the publicity clause may be evaded by many firms, which would pack and label in the state goods intended for sale in the state The enactment of an "open formula" statute in the state would accomplish much

PENNSYLVANIA

Personal—Drs Edith Conser and Alice Stuffian have been appointed for duty in the female department of the State Hospital for the Insane, Norristown ——Dr Wallace W Dill, Pottstown, has been appointed physician of the poor, to fill an unexpired term ——Dr Andrew B Gloninger, Lebanon, sailed for home from France September 29 ——Dr Frank Keagy, Altoona, is seriously ill with typhoid fever at Atlantic City ——Dr James C Dunn, Pittsburg, is reported to be dangerously ill at his home ——Dr Israel Cleaver was re-elected secretary of the Reading Hospital Association, October 1

State Wins Vaccination Fight—In an opinion handed down by Judge W Rush Gillan of Chambersburg, October 5, in the mandamus proceedings brought by Attorney General Carson against the school officials of the Waynesboro grammar school, he sustains the vaccination law, excluding from the schools those who are unable to present proper certificates of successful vaccination He reviewed the laws concerning vaccination, and directs that this section of the health law shall be enforced by the directors and not by the teachers, taking the position that the directors, being elected by the people, are the responsible officials and not the teachers, who are elected by the directors

Philadelphia

Medical Faculty Change.—The medical department of the University of Pennsylvania has established a department of experimental surgery, and Dr J E Sweet, formerly connected with the laboratory of hygiene, and more recently with the Rockefeller Institute, has been placed in charge

Personal.—Dr Addinell Hewson has resigned his position as assistant professor of anatomy in Jefferson Medical College ——St Agnes' Hospital has recently created a department of orthopedic surgery and Dr H. Augustus Wilson, professor of orthopedic surgery in Jefferson Medical College, has been appointed chief of the new department.

Free Bed for Hospital.—Employés of the Bell Telephone Company of Philadelphia and the Delaware and Atlantic Telegraph and Telephone Company have endowed a free bed in the Pennsylvania Hospital in memory of the late Theodore Spencer, who was vice president and general manger and director of the companies A memorial tablet wil be placed in the central hall of the hospital

Conference of Anti Vaccinationists—A state conference of the opponents of compulsory vaccination was held in this city October 3 and 4 About 80 delegates were present The object of the meeting is to take political or other action to prevent the use of virus, to perfect plans to nominate candidates for governor and the legislature favorable to the repeal of the twelfth section of the act of June 18, 1895, which provides for the exclusion of unvaccinated children from all schools A resolution was passed condemning vaccination in toto, but more especialy that of sick children

Health Report—The total number of deaths reported for the week ended October 6 aggregated 402 This is a decrease of 37 from the number reported last week, and a decrease of two from the number reported in the corresponding week of last year The principal causes of death were Typhoid fever, 9, diphtheria, 9, cancer, 18, heart disease, 51, Bright's disease, 41, accidents, 16, pertussis, 7, consumption, 45, apoplexy, 12, acute respiratory disease, 38 enteritis, 26, suicide, 2, and marasmus, 9 There were 183 cases of contagious disease reported, with 19 deaths, as compared with 180 cases and 30 deaths reported in the preceding week

Dr Wood Resigns—Dr Horatio C Wood has resigned his position as professor of materia medica, pharmacy and general therapeutics in the medical department of the University of Pennsylvania, on account of ill health Dr Wood has been connected with the university since 1862, when he was graduated from the medical school He has held the chair of materia medica, pharmacy and general therapeutics since 1876 He was a visiting physician to the Philadelphia Hospital from 1872 to 1887, and to the University Hospital since 1870 His resignation was accepted by the board of trustees and he was immediately elected, by unanimous vote as emeritus professor of materia medica, pharmacy and general therapeutics

Hospital Reports—During September the Germantown Hospital admitted 103 patients and discharged 107 the total remaining October 1 being 37 There was 1 253 cases treated in the dispensary, as follows Medical and surgical 805, eye, 136, ear, 67, throat, 56 nose, 77, nervous 52 ——The Polyclinic Hospital admitted during the month 98 patients and discharged 83, 378 new patients were treated in the dispensary, to whom a total of 1 402 visits were made ——The Methodist Hospital reports for September as follows Patients admitted to the house, 74, treated in the dispensary medical, 41 surgical, 455, gynecologic 11, eye, 96 ear 14 nose and throat, 30, skin, 46, orthopedic, 6 and pediatric 20 total patients treated, 722, total visits to the dispensary, 3 201 ——The report of the Howard Hospital for September shows that 781 new dispensary patients were treated and that 327 prescriptions were prepared ——The Samaritan Hospital admitted 112 patients to the wards and treated 2,263 patients in the different dispensaries

Newspaper Advertising—A committee of the Philadelphia County Medical Society prepared the following resolutions to be acted on October 11

1 *Resolved* That the publication in the lay press of the description of operations new treatment and allied medical matters in connection with the name of the physician be condemned by the society and that the physicians of the society in order to prevent such publication make such representations to the superintendents or other officers of the hospital with which they are connected as will so far as possible prevent internes nurses employes or friends from giving information to reporters.

2 *Resolved* That the society try to prevent reports of the papers read at its meetings from being publicly mentioned unless such publication be conducive to the public welfare The [illegible] shall instruct its secretary or reporter to give to the [illegible] sored report which shall always be anonymous so far [illegible] thorship of the papers is concerned.

3 *Resolved*, That the society condemn the publication of medical interviews in connection with the names of physicians, excepting medical interviews relating to municipal sanitation and other matters of public welfare

4 *Resolved* That copies of all articles appearing in the press of Philadelphia relating to regular physicians of that city shall be placed in a scrap book by the assistant secretary for the inspection of members A member whose name appears therein shall have the privilege of attaching thereto a written explanation

5 *Resolved*, That copies of these resolutions be printed in The Journal of the American Medical Association the *Weekly Roster* and *American Medicine*

Inspection of City's Water Supply—During the week the city's water commission inspected the city's water supply from Pottsville to Philadelphia The report of the commission shows that millions of gallons of sewage from towns up the state and tons of coal dust are daily being poured into the waters of the Schuylkill which is the main source of the city's water supply Reading, with a population of 97 000 inhabitants, empties 2,000 000 gallons of sewage into the river daily, and Pottsville, Pottstown, Phœnixville, Tamaqua, Spring City and other towns bordering the stream empty their polluted sewage into the river Of all the towns indiscriminately emptying their sewage into the river only one, Reading, is making any effort to abate the nuisance There a sewage disposal plant is being erected, but it will be six months before it will be finished The other towns, the commission reports, are indifferent as to the extent to which they contaminate the city's water supply It was found that the head of the river was fairly black with coal dust It is estimated that the coal sewage amounts to more than 5,000,000 gallons a day The examination of the commission was supplementary to the examination which has been going on for some time by engineers and water experts employed by the commission and state authorities Since the appointment of Dr Samuel G Dixon, state commissioner of health plans have been instituted to prevent the indiscriminate pollution of the city water supply, and a marked improvement has taken place as a result of his efforts

RHODE ISLAND

No Dogs at Large—Hydrophobia is being frequently reported in various parts of Massachusetts, Connecticut and Rhode Island Woonsocket, R I, has adopted the regulation that for six months no dog shall be allowed to run at large, whether muzzled or not

District Society Meeting—The Woonsocket Medical Society held its first meeting September 20 The following officers were elected President, Dr William C. Monroe, vice president, Ara M Paine, secretary, Elisha D Clarke, treasurer, John J Baxter, and censors, Drs Joseph T Roswell, Robert G Reed and Joseph E Tanguay

Personal.—Dr Richard P Boucher Providence, has gone to New York to receive treatment in the Pasteur Institute——Dr Jioacchino Carella has taken charge of the Italian outpatient ward at the Twin City Hospital, Pawtucket——Dr Henry J Hoye and Jay Perkins, Providence, have been reelected examining physicians for the State Sanatorium, Wallum Pond

SOUTH DAKOTA.

Personal—Dr Edward F Dann, Clarke, has been seriously ill at his home——Dr Rudolphus D Jennings, Hot Springs, has been elected governor of the Battle Mountain Sanitarium, vice Dr A G Hull, resigned——Dr William S Bentley has resigned as surgeon of the Soldiers' Home, Hot Springs

County Hospital.—The commissioners of Brown County have decided to present to the voters of the county the question of building a new county hospital and poor farm The board is in favor of issuing bonds for $15,000 for the erection of the hospital The need is apparent, as the present county hospital is not large enough to meet the demands

VIRGINIA.

New Hospital.—Drs Stuart N Michaux, James W Henson and F K. T Warwick have purchased two buildings on the boulevard north of Grove Avenue, Richmond, and are converting them into a hospital and sanitarium, to be known as the William Byrd Hospital.

Physicians May Exceed Speed Limit—In the police court in Norfolk, September 25, in the case of Dr Stanley H. Graves, charged with violating the law by running his automobile too fast in that city, it was decided that a physician on an errand of mercy is exempt from speed limit

Refuses to Make Recommendation.—The Norfolk Medical Society, at a specially called meeting, September 19, refused by a vote of 29 to 25 to recommend any one for health commissioner, holding that any member of the society is fully competent to discharge the duties of that office

Personal—Dr Tazewell Bradley, Roxbury, suffered a severe cerebral hemorrhage in Richmond, September 20, and is reported to be in a critical condition——Dr Fayette A Sinclair, Hampton, who has been one of the physicians at the National Soldiers' Home for some time, has resigned in order to take up private practice——Dr Robert E Wine, Brentsville, was taken to Washington, September 22, and was operated on the next day for appendicitis——Dr John N De Shazo, Center Cross, is rapidly improving after serious illness with typhoid fever

Colleges Open—The sixty ninth session of the Medical College of Virginia, Richmond, opened September 19 Dr Christopher Tompkins delivered the opening address Dr Manfred Call has been appointed professor of practice of medicine, vice Dr Robert F Williams, resigned, Dr Clifton M Miller has been transferred from the chair of anatomy to that of diseases of the nose and throat, Dr J Fulmer Bright has been elected professor of anatomy and Dr Charles R Robins, professor of gynecology——The University College of Medicine, Richmond, opened for its annual session, September 19 Dr Stuart McGuire delivered the opening address Dr W H O McGehee has been elected head of the dental department of the college

WYOMING

Typhoid Fever—Typhoid fever has broken out in Evanston and 7 cases are reported The city water is said to be responsible

Hospital to be Established—Bishop J J Keene of the Roman Catholic church is looking for a location for a Sisters' hospital and will, it is expected, decide on Thermopolis

State Society Meeting—The eighth annual meeting of the Wyoming State Medical Society was held in Casper, September 24 and 25 The following officers were elected President, Alfred C Godfrey, Lander, vice presidents, T A Dean, Casper, Charles E Stevenson, Sheridan, and G A Bristol, Evanston, delegate to the American Medical Association, Dr Alfred C Godfrey, Lander, and alternates, Drs George L Strader, Cheyenne, and Oliver Chambers, Rock Springs Dr George L Strader, Cheyenne, was re elected secretary, and A Francis Hoff, Casper, treasurer Lander was chosen as the place for the 1907 meeting

GENERAL

Yellow Fever and Dengue in Cuba.—According to newspaper reports, during the first week in October three cases of yellow fever were reported in Havana and twelve suspicious cases in which the diagnosis was unconfirmed Of the latter two were at Guanabacoa a suburb of Havana Ten cases of dengue are reported from Havana

The Jamestown Exhibition—Passed Assistant Surgeon Rupert Blue of the United States Public Health and Marine Hospital Service has been appointed sanitary director of the Jamestown Exposition Dr Blue has already assumed his duties in connection with the exposition, which will open April, 1907 The United States Public Health and Marine Hospital Service will have an exhibit in the Government Building representing the scope of the service work, including the marine hospital and quarantine services, the work of the hygienic laboratory and the sanatorium treatment of tuberculosis

Chess Players Arrange Match for Physicians—The Tri State Chess Association, an organization of over 400 players, the majority of whom reside in the central states, is arranging a correspondence match at chess of the doctors versus the laity It is desired to have physicians from every section of the United States engage in this match Therefore, every chess loving physician is hereby invited to become a consultant in the case The match will begin in November All who will play are urged to send name and address to the president of the association, Dr F B Van Nuys, Lorain, Ohio, stating the number of games they will assume

Cholera in Manila—Dr Victor Heiser, chief quarantine officer, reports that cholera is still prevalent in the Philippines For the first time since the outbreak began—nearly a year ago—several cases are being found in the same house, but the infection occurs almost simultaneously in all cases, which would indicate that it is due to infected food introduced into the house A rigid inspection made of the truck farms in and around Manila shows that in spite of the precautions taken there are still a number of gardeners who use liquid human excrement for fertilizing A number of them were arrested and fined It seems probable that the outbreaks which occur from time to time in Manila may be attributed to this source The question of fertilizing vegetables with human excrement became so acute that the Philippine Commission has taken legislative action and passed a law which makes it a penal offense to use this substance for fertilizing purposes The two important sections provide

> No farmer market gardener or other person or persons shall use any human excreta, excrement dejecta or the contents of any water or earth closet, privy vault cesspool latrine pail or other receptacle for human feces or urine as a fertilizer for any land on which is grown any article or product intended for human food or human consumption or allow any human excrement, excreta or dejecta to be sprinkled or applied in any manner or for any purpose to any crop product, or vegetable growing on said land
>
> A fine of not less than $25 nor more than $100 or imprisonment not to exceed six months or both, shall be imposed on each person found guilty

It was deemed advisable to modify the outgoing quarantine detention on outgoing vessels Regular army medical officers were detailed to act as quarantine officers, at outgoing ports which made it possible to inspect many vessels at the port of arrival, thus effecting a considerable reduction in the quarantine detention period This modification has been much appreciated by the shipping interests and by the provinces persons living outside of Manila being able thereby to obtain much better freight rates than when full quarantine is imposed It is hoped, that this will have a material effect in relieving the business depression, and at the same time give reasonable security to the provinces against being invaded by cholera through the maritime traffic The necessity for granting some relief to the shipping interests will be better appreciated when it is remembered that outgoing quarantine has now been imposed continuously for almost one year

CANADA

Toronto University Senate Elections—The following Ontario practitioners have been elected representatives on the senate of Toronto University to represent the graduates in medicine Dr Herbert J Hamilton, Toronto, 1 175 votes, Dr C J C O Hastings, Toronto 826, Dr Wilbur H Harris, Toronto, 708, Dr William Burt, Paris, 625

New Sanitariums—Winnipeg, Man is to have a City Home for Convalescents conducted by the Women's Hospital Society of that city——Eastern medical men and a prominent medical man of Winnipeg are said to have purchased 14 000 acres of land in Manitoba, fronting on Lake Manitoba with the intention of establishing a sanitarium for consumptives

Medical School News—The Medical Faculty of Toronto University opened for the 1906 1907 session October 3 Sir Almroth F Wright M.D, F.R.S, St Mary's Hospital London, Eng, delivered the opening lecture his subject being "Inoculation with Bacterial Vaccines" The freshman class numbers 179——It is rumored that the Ontario government will endow a chair of anatomy in the University of Toronto in the near future——There is an increase in the attendance of medical students at McGill University Montreal, this year the total being about 400

Personal—Dr Shirley McMurtry Montreal has gone to Japan for two years——Dr Goldwin Howland, Toronto, has returned from England, where he was married recently——Dr H A Stewart, Saskatoon, Sask, has received the offer of the appointment of neuropathologist and lecturer on pathology in the Indiana State Hospital at Indianapolis——Dr T K Holmes, Chatham Ont, one of the leading surgeons of western Ontario, narrowly escaped drowning recently having accidentally fallen into the Thames when returning at night from visiting a patient.——Dr James Stewart, professor of medicine in McGill University is suffering from a stroke of paralysis——Dr H M Church, Montreal was recently tendered a dinner by the McGill anatomic staff, on the occasion of his approaching marriage

Ontario Postpones Its Department of Health.—The Ontario government has appointed new members to the Ontario Board of Health It was thought at one time that the government contemplated creating a new department with a minister of health at its head, but no doubt it was felt that this would be too progressive a move for a little province like Ontario to initiate The opportunity to lead in this coming reform is, therefore passed by The composition of the new board is as follows, only one of the old board receiving recognition Dr Charles Sheard M H O, Toronto, Dr Robinson M.H O, Guelph, Dr Hall, M H O Chatham, Dr M I Beeman Newburgh, Dr J A S McCullough Alliston, and Dr C A Hodgetts The last mentioned is the present secretary, and will continue to act in that capacity

FOREIGN

Death of Patient Does Not Release Physician from Obligation of Professional Secrecy—This is the recent decision in a case before the courts of Saxony in which a widow summoned her husband's physician to testify in regard to his illness The higher courts confirmed the decision

New Insane Hospital in Australia—Plans have been prepared for a new hospital for the insane to be built near Melbourne, Victoria The building will contain 124 beds There will also be a large central kitchen and an administration building Each ward will contain some single rooms, a dining room and a kitchen, where some of the simpler meals can be prepared The hospital is intended for the treatment of acute cases which offer hopes of speedy recovery

Adventuresses Posing as Doctors in Paris Rob Patients—The cable states that two women have just been arrested in Paris for illegal practice of medicine and for swindling They rented a business suite of offices and advertised extensively throughout the provinces that they could cure all abdominal troubles without an operation While the assumed doctor was examining the partly stripped patient the other woman was rifling the pockets in the clothes left in the adjoining room

International Trachoma Prize.—As already mentioned, the Hungarian government has offered a prize of $250 for the best work on the etiology of trachoma offered in competition before Dec 31, 1908 The work can be in English French German or Hungarian, and the prize will be awarded at a general session of the Fifteenth International Medical Congress at Budapest, in September, 1909 Published works are eligible if they do not appear before 1907 or 1908 Address Budapest 1, Vár, Belugyministerium

Neisser to Resume His Syphilis Research on Monkeys—It is announced that Professor Neisser intends to return to Batavia in November to continue his experiments on monkeys with syphilis His previous work with monkeys at Breslau in 1903 and 1904 and in Batavia last year, were all at his own expense, but now he has an appropriation of $25 000 from the government for the work, which has been zealously continued by the two assistants he left behind when he returned The party still includes Halberstädter and von Prowazek, an authority on protozoa has joined, and also K Bruck, formerly of the Institute of Infectious Diseases at Berlin, and Siebert, who takes Baermann's place The latter leaves to take charge of a large hospital in Sumatra, devoted chiefly to cutaneous and venereal diseases

The Moritz Souvenir Number of the St Petersburg Wochenschrift—Instead of its usual modest proportions our St Petersburg contemporary appears as a journal of 85 pages in its issue for September 20 This is in honor of the seventieth birthday of Dr E Moritz of St Petersburg, the founder of the weekly, 31 years ago, and also founder of the Alexander Hospital The issue contains 20 thoughtful articles on the action of colored light on the eye orthostatic albuminuria treatment of the vicious circle after gastroenterostomy indications when vision is threatened by *pregnancy, surgical treatment of* severe cervical and occipital neuralgia, tetanus in the Russian army, phosphorus metabolism acute pseudoleukemia antiseptic action of menstrual blood on ulcus molle fever with visceral syphilis etc The authors include the best known St Petersburg medical writers The *Wochenschrift* is the only medical journal published in German in Russia and it has been a welcome link between the profession in Russia and the outside world

Quartercentenary of Aberdeen University—The quartercentenary of this university was celebrated during the last week in September This is the four hundredth anniversary of the formal constitution of King's College which was the original university The university was founded at the end of the *fifteenth century and is the third in point of age in Scotland* It was founded by William Elphinstone bishop of Aberdeen and like all medieval universities was a Roman Catholic institution From the very beginning there was not only a faculty but a chair of medicine at Aberdeen and it is said that this is the oldest in Great Britain An interesting account of the university is given in the *British Medical Journal* Sept 22 1906 with several excellent illustrations of the university at various periods The new Marischal College was opened by King Edward September 27 Many honorary degrees were conferred Among those so honored are Drs Howard A Kelly Baltimore and J William White Philadelphia who received the degree of LL.D This degree was also conferred on several well known Canadian physicians

LONDON LETTER.

(From Our Regular Correspondent)

LONDON, Sept 15, 1906

A Recently Discovered African Arrow Poison.

Dr C Bolton has communicated to the Royal Society the results of an investigation which he has made of the toxic properties of an arrow poison obtained by Dr D Alexander from a medicine house in a pagan town in northern Nigeria Dr Alexander observed that the fresh poison is a semifluid, sticky, black substance It is smeared on sticks and when required for dipping arrows is scraped off and heated It appears to consist of the juice of a kind of fig, the placenta of which is used in the manufacture of the poison Dr Alexander saw a native shot in the abdomen die in twenty five minutes, apparently from heart failure Dr Bolton experimented on cats, rabbits, guinea pigs and frogs with the poison dissolved in 0 86 per cent. of salt solution He found that it has a selective action on muscular tissue and that there is no evidence that it has any action on the central or peripheral nervous system It paralyzes voluntary muscle and produces death by the same action on the heart It first stimulates the muscular coats of the arteries and thus causes a rise of blood pressure, with the result that the vagus center in the medulla is excited, causing slowing of the heart and a fall in blood pressure Then the irritability of the heart is greatly increased and soon the vagus fails to hold it in check The chief factor in maintaining the high blood pressure seems to be the constriction of the vessels The heart becomes more and more rapid and irregularity appears a condition of delirium cordis follows, and finally, the heart stops in diastole

Increase of the Use of Preservatives in Food.

Dr A E Harris, health officer for Islington, one of the largest of the London boroughs, reports that the use of preservatives in food is increasing and that their number is multiplying They include alum, alcohol, ammonium, acetate, boric acid and its compounds, carbon dioxid, copper salts, creosote, fluorin compounds, formic acid, formaldehyd, hydrogen peroxid, oxygen, pyroligneous acid, saccharine, salicylic acid, saltpeter, sodium carbonate sugar, sulphites of sodium and calcium and sulphuric acid These are used in bacon, beer, bottled fruit, British wine, butter, black puddings, white puddings, cheese, cordials, cream, fish, fresh meat, game, ham, ketchup, lime juice, maragarin, milk, pork pies, sauces, sausages, temperance drinks, vegetables, vinegar and wine, and almost every article of food that can be named Dr Harris adds that the object is either to retard decomposition or to enable food prepared under unsatisfactory conditions which would otherwise speedily spoil to be sold In other words, the object is to induce people to think that they are receiving a well prepared or freshly made article He considers that it is high time that something definite be done by the government to check the abuse of food preservatives

VIENNA LETTER.

(From Our Regular Correspondent)

VIENNA, Sept 20, 1906

Increase of Alcoholism Among Women

The recent report of the commissioner for lunacy contains some interesting remarks as to the fluctuation of the number of habitual drinkers It appears that in lower Austria there are over 2,800 drunkards known as such to the local authorities Crimes committed under influence of alcohol by these individuals can not be punished, but these people are kept for a certain period under close observation, and if there is danger of the crime being repeated, detention of the individual in a lunatic asylum is ordered by the judge Therefore, the number of hapless persons is well known to the medical and board of guardians commissioners Of this number of 2 800 only 640 are women, the rest men, but a comparison with the figures for the last decade shows the constant though as yet not very considerable increase of the number of females from 520 to 640, or 22 per cent, whilst the increase of population for the same period is only 17 per cent The number of males detained for habitual drinking is fairly constant, averaging 2,200 for the time of record, thus actually declining, if the annual increase in population is taken into the calculation These facts are the more remarkable, as the consumption of alcoholic beverages has been declining since 1899, especially since the new duties imposed on beer are in force The total output of beer is lower by 5 5 per cent, of wine 13 per cent, and liquor 3 per cent (not including spirits for industrial purposes), and the temperance movement is getting a firm hold among the university students, formerly known for their drinking capacities

Regulation for the New Slaughter-House.

The necessity of supplying a sufficient quantity of cattle for the purpose of butchering has brought about the erection of a new slaughter house in Vienna, for which new regulations have been issued First of all, a certificate of health not older than eight days must be produced before the cattle are allowed to enter the premises, and must be signed by a veterinary surgeon of the capital. The house itself must be kept clean and sanitary All the ejecta and waste matter must either be buried or burned Adequate storage rooms with ice receptacles will be kept for the benefit of the vendors, but the ice has to be provided by the latter from an unimpeachable source The necessary lavatories must be inspected daily to ensure their good working order The officers and employés of the slaughter house must be clean in habits and dress The smell of blood must be prevented by a constant current of water, and each animal must be blindfolded before entering the slaughtering hall The butchered meat is to be subjected to an examination by a staff of specially appointed trained veterinary surgeons before being pronounced fit for human consumption All meat condemned will be seized and destroyed without exception The examination is to be directed toward the detection of *Trichina spiralis*, tuberculosis, anthrax and septic conditions In case of meat derived from hares, rabbits, venison or other not usual animals, the examination is to include methods of discovering diseases to which these animals are liable, and which might be transmitted to man by the use of such meat

The Charge for a Consultation by Telephone

The widespread use of the telephone has caused the *"Aerzte kammer"* (medical council) to advise its members to charge for every consultation by telephone as for an actual visit in the house of the physician At the same time the *"kammer"* leaves it to the discretion of the physician to find out, if the case is such a one that it can be commented on or treated without seeing the patient, reminding its members that treatment "by letter" is not considered right A charge of at least 50 cents is recommended as a minimum fee for every telephonic information of a medical nature requested by the patient.

Pharmacology

THE SOLUBILITY OF ACETANILID IN SODIUM BICARBONATE SOLUTIONS

W A. Puckner

Secretary of the Council on Pharmacy and Chemistry of the American Medical Association Professor of Chemistry University of Illinois School of Pharmacy

CHICAGO

There seems to be a general impression among physicians and pharmacists that sodium bicarbonate renders acetanilid more soluble, or that the acetanilid is more readily absorbed in the stomach if mixed with sodium bicarbonate. Thus, Dr John Ritter, in THE JOURNAL A M A., Sept 1, 1906, page 683, in comparing the official pulvis acetanilidi compositus with the many proprietary acetanilid preparations, says "Therapeutically it matters very little if in all these various preparations the amount of citrate of caffein is 1/50 grain more or less, or if the amount of bicarbonate of soda is ½, ¾ or 2 grains in each dose, or if the alkaline salt be bicarbonate of soda or potassium carbonate, or carbonate of ammonia, each of which is added simply as a solvent for the acetanilid" Dr Ritter is here merely repeating an accepted belief which appears to have no basis as a fact

Acetanilid, $C_6H_5NH(CH_3CO)$, is the acetyl derivative of anilin, $C_6H_5NH_2$, the latter may be considered as a benzene or phenyl derivative of ammonia, NH_3 Just as ammonia combines with acids to form salts so anilin combines with acids to form salts, and these anilin salts (anilin sulphate, anilin chlorid) are generally more soluble in water than anilin itself While in acetanilid the alkaline properties of anilin have been neutralized almost completely through the introduction of the acetyl group, yet it still is mildly basic and to a certain extent combines with acids to form salts, that is, just as anilin forms anilin chlorid, so acetanilid can form acetanilid chlorid

And just as the solubility of anilin in water is increased by the addition of an acid, through salt formation, so the solubility of acetanilid is increased by acids I have made experiments in which an excess of acetanilid was added to water containing 0 4, 1 0, 5 0 and 10 0 per cent hydrochloric acid. After agitating for several hours the solutions were filtered and the dissolved acetanilid estimated in portions of the filtrates These determinations show that acetanilid is much more soluble in 10 per cent hydrochloric acid than in water, but that in a 0 4 per cent hydrochloric acid solution its solubility is but slightly increased

From theoretical considerations it was not to be believed that the solubility of acetanilid would be increased by sodium bicarbonate This belief was verified by the following experiment An excess of acetanilid was added to water, the mixture agitated occasionally for several days and filtered To 25 c.c. of this saturated solution of acetanilid in water was added less than 0 005 gm acetanilid and 1 gm sodium bicarbonate and the mixture agitated occasionally during 24 hours Solution of the acetanilid did not occur, showing that the solubility of acetanilid is not increased even when a relatively large proportion of sodium bicarbonate is added

These experiments—which were repeated in different ways—appear to demonstrate that the addition of sodium bicarbonate to acetanilid does not increase its solubility, in the stomach its solubility will rather be decreased if sodium bicarbonate is added because the acid usually present in the gastric juice will be partially or wholly neutralized

If these conclusions are correct, then the addition of sodium bicarbonate to acetanilid is useless if the object is to make the acetanilid more soluble

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Fraud and Deception Connected with So-Called Cod-Liver Oil Preparations.

The introduction of cod liver oil as a supposedly easily assimilable nutrient and reconstructive was followed by its extensive use in wasting diseases, especially in phthisis, in the treatment of which it came to be considered almost essential as it was supposed to possess some mysterious power different from that of other oils Its unpalatable character led to various devices to render it tasteless and to make it more acceptable to the stomach Emulsions containing the oil in mixture with other substances were put on the market and served a useful purpose But the oily nature, imperfectly concealed, was disagreeable to many, and gradually other preparations appeared which attempted to retain the supposed therapeutic virtues of cod liver oil while dispensing with its disagreeable character This attempt has been carried to the extreme that in many of the cod liver oil preparations now on the market the oil has been entirely eliminated and all that is left of the oil is the name This is a species of fraud which has been tolerated too long, but which will be kept up so long as physicians are willing to be duped Some of these articles are said to "represent" the oil and to possess all its virtues Others are said to contain oil, while still others are stated to contain "all the valuable constituents" What is the standard by which we may determine the true value of these preparations and by which we may determine whether or not we, and through us our patients, are being humbugged?

A FOOD OR MEDICINE—WHICH?

Is cod liver oil to be considered a food or a medicine? A food, certainly As a food its value will consist in the fats it contains These fats are more easily oxidizable and are considered more digestible than other fats because of the presence of compounds derived from the liver which favor its emulsification and enable it to penetrate the mucous membrane more easily than other fats Aside from their nutrient properties we have no evidence that the fats of cod liver oil possess any therapeutic value, if the oil possesses therapeutic qualities they must reside in its non fatty constituents, and the activity of these non fatty constituents is not acknowledged by those who have investigated them scientifically Most pharmacologists believe that whatever virtue there is in cod liver oils depends on its qualities as an easily assimilable fat

On the whole, we must conclude with Cushny that "cod liver oil has not been shown to have any action apart from that of an easily digested food, and its superiority to some other fats and oils has not been satisfactorily established"

If, then, the value of cod liver oil depends on the presence of fat as its nutritive constituent, the amount of fat a preparation contains will determine the worth or worthlessness of such a preparation, at all events, a preparation claiming to represent cod liver oil which does not contain fat in some form is fraudulent.

HOW TO PROVE OR DISPROVE THE PRESENCE OF COD-LIVER OIL.

Fats may be changed to fatty acids or to soaps, as occurs under the influence of pancreatic juice in digestion, and still retain their nutritive value, but it is not possible to manipulate them in any way so that they are still valuable as food, and yet do not respond to easily applied chemical tests which demonstrate their fatty nature

Any preparation of cod liver oil in which fat or fatty acid is not recognizable by proper tests is valueless as food, since its food value depends on the amount of fat or fatty acid present An elementary knowledge of chemistry and the application of a few simple tests will enable any physician to learn for himself whether or not a preparation contains fat or fatty acids

The preparations claiming to "represent" cod liver oil are in liquid form, and if they contain oil it must be one of the following forms

1 An emulsion of the oil which may be miscible with water, but from which the fat tends to separate and rise to the top In this form the fat can be seen as globules under the microscope

2 A solution, resulting from the saponification of the oil, containing a soap which usually will be alkaline in reaction, especially when mixed with water, and from which fatty acids are separated as a precipitate when the solution is acidified

3 A solution of fatty acids This will be acid in reaction and will be precipitated by the addition of water, in which the fatty acids are not soluble.

WATERBURY'S METABOLIZED COD LIVER OIL.

To illustrate the testing of these preparations we may take Waterbury's "Metabolized Cod Liver Oil Compound," which, according to the label, "contains the metabolized product obtained by the action of ferments on cod liver oil," with other ingredients It is claimed that the oil has been "metabolized"* by the action of pancreatic juice We would expect to find the fat in one of three forms mentioned above Examination which any physician can make shows the following facts

1 It is a clear liquid and no globules of oil are seen under the microscope It is therefore not an emulsion

2 It is of acid reaction when mixed with water and remains clear when strongly acidified Hence it does not contain a soap, and is not a saponification of fat

3 It mixes with water without precipitation, hence it cannot contain more than traces of a fatty acid

By these simple tests a physician is easily able to demonstrate that the preparation does not contain cod liver oil It is therefore valueless for the purpose of nutrition, for which we give the oil More careful analysis confirms the results of these tests and shows that it contains no fat or fat acids (except the merest traces), one or more bodies with alkaloidal reaction may be extracted from the compound with ether after adding an alkali No intelligent physician should be misled by the extravagant and unfounded claims made for this preparation

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* This use of the term "metabolized" is by a manufacturer's use and does not correspond to that of physiologists or of the dictionary which defines metabolism as the "act or process by which on the one hand dead food is built up into living matter and by which on the other hand the living matter is broken down into simpler products within a cell or organism" It can [illegible] be used to describe a process occurring outside the body [illegible] the manufacturers have penetrated the secrets of nature farther than any physiologist has yet been able to go

HAGEE'S CORDIAL OF COD LIVER OIL.

But there are other preparations which present the matter in a slightly different form

Hagee's Cordial of Cod-Liver Oil Compound is said to "represent 33 per cent of pure Norwegian cod liver oil," with other ingredients, in perfect solution It is also claimed, according to the advertising pamphlet, that "in this preparation we have every beneficial constituent of the best and purest Norwegian cod liver oil" Put to the above three tests, however, Hagee's cordial of cod liver oil is not, 1, an emulsion of cod liver oil, 2, is not a saponification of cod liver oil, and 3, does not contain fatty acids It therefore contains no cod liver oil The only nutrients in the mixture, revealed by analysis, are sugar, alcohol and glycerin, none of which is contained in cod liver oil

In this case the manufacturer misleads by the use of the word "represents," he is careful not to say "contains," although the average reader would not be apt to notice the nice distinction The manufacturer unwittingly admits that it contains no oil when he says that it "contains everything of value except the grease" What else there is of value in cod liver oil besides the "grease" we do not know Certainly, if we estimate the value of the remedy by its nutrient properties it must be set down as practically worthless, if not fraudulent, for although a mixture of sugar, alcohol and glycerin does possess certain nutrient value, the materials can be puchased for it far more cheaply in the open market It is evident that claims are made for this preparation which can not be substantiated

Again, some of the so called cod liver oil preparations are termed extracts of cod liver oil, but are not in fact made from the oil, but from the cod livers instead They are preparations which, if honestly made, might be worthy of trial, but they are improperly called "extracts" of cod liver oil, since they do not contain the fat, which is the active constituent of the oil, but the extractives from the liver which may or may not possess therapeutic virtues So far as we know, however, no satisfactory evidence is forthcoming to indicate that such extractives have any therapeutic value

The attempt to modify cod liver oil for therapeutic purposes may be pronounced a failure and the large variety and extensive sale of these preparations appear to be owing to the fact that physicians do not recall the ordinary facts of chemistry and fail to apply simple tests with little technical skill, but too readily accept as facts the statements of the manufacturers

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Correspondence

Interstate Reciprocity and Frauds in Medical Schools

San Francisco Oct 1, 1906

To the Editor —The communication of Dr Ethan H Smith professor in the College of Physicians and Surgeons of San Francisco in The Journal, Sept 29, 1906, contains so many grave inaccuracies that I beg to be permitted, in reply to state that 1 The requirements in California are not determined by the Board of Examiners, but by the Association of American Medical Colleges 2 H. R. Painton neither claimed nor was he entitled to credit on matriculating at the College of Physicians and Surgeons of San Francisco, the annual announcements of which invariably contained the requirements of the above mentioned association 3 The records of the California board show Mr Painton's statement to the credential committee, confirming all the assertions as to his having taught school in South San Francisco during the two years preceding his graduation from the College of Physicians and Surgeons of San Francisco 4 His work in the medical and pharmacy departments during the two months' summer vacation is not denied, but such work can surely not be construed as an annual course. 5 Last April just prior to the earthquake I consulted the college records in reference to Painton The dean, Dr Hodghead and the president, Dr Winslow Anderson were present. My carefully made notes show that none of the teachers' blanks gave Painton credit for attendance in 1903 and 1904, whereas attendance was credited for the two subsequent courses 6 In the opinion of the district attorney of San Francisco Painton's act constitutes perjury 7 The archives of the California board contain numerous similar instances of fraud on the part of the College of Physicians and Surgeons of San Francisco 8 The perusal of the records and minutes of the California board all of which are open for public inspection, and a close study of the constitution of the Association of American Medical Colleges are respectfully suggested to Dr Ethan H Smith

Dudley Tait

The Necessity for Better Provision for Legal Medicine in This Country

New York, Oct 8, 1906

To the Editor —Anent your editorial on the above subject August 25, in which you lament the lack of instruction in medical jurisprudence, kindly permit one of your readers to say that as far as Cornell is concerned, your statement is incorrect

While it is true that Cornell does not have a special chair in medical jurisprudence, that subject is as thoroughly covered as is possible without such special chair, by some of the other departments of the reguar course, viz lectures in toxicology by Prof R A Witthaus to third year students, gross pathology and autopsy work at the morgue in the third and fourth years respectively, under the direction of Dr O H Schultze, who is a coroner's physician of several years' standing and a medicolegal expert of more than local renown, and, last but not least, in the thorough course in mental diseases given to the senior class by Prof A Meyer, head of the New York state hospitals for the insane

In this connection I fully agree with your Philadelphia correspondent in his note published October 6, that a lawyer can not give adequate instruction in this important branch, and that, furthermore, a coroner's physician is almost indispensable

Samuel Hollander, M D

Philadelphia, Oct 6, 1906

To the Editor —The letter of my friend, Prof Henry Leffmann, on 'The Teaching of Medical Jurisprudence," published in the last number of The Journal, may possibly be misunderstood by some who are not familiar with the inner workings of the coroner's office of Philadelphia First of all, the "City Party," an organization which has done so much for bettering the political situation in Philadelphia, elected its nominee for coroner last November, and anyone who has paid attention to the manner in which this office has been conducted since Jan 1, 1906, by the present coroner, J M Rush Jermon, Esq, of the Philadelphia bar, knows that the business of this department has been carried on honestly, fearlessly and well It should also be stated in this connection that the exposures by the *Record*, to which reference was made in Professor Leffmann's letter, occurred many years ago Second, the *Proceedings of the Philadelphia Pathological Society* for the past twenty years show numerous and constant references to material of a medicolegal nature collected and exhibited at this society by the various physicians to the coroner, while hundreds of dead bodies from the coroner's office have been autopsied, and specimens taken from other cases demonstrated, before the students of our various medical colleges during the same period of time While serving as senior coroner's physician of Philadelphia from 1896 to 1899, the official records of the office show that I made 799 autopsies The material removed from these bodies was largely used in a teaching position which I then held in connection with one of our medical schools Indeed, my own book on "Postmortem Pathology," of which the third edition is to be translated into German and the forthcoming work on "Medical Jurisprudence," by Dr William S. Wadsworth, the present incumbent of the office, and myself, would have been impossible were it not for the data collected from those dying violent and suspicious deaths in the city of Philadelphia

Henry W Cattell.

Jersey City, N J, Oct 6, 1906

To the Editor —In a letter in The Journal, September 8, I took exception to a statement you had made in a previous editorial (August 25) that certain New York medical schools make no mention of the subject of medical jurisprudence In informing you that a course in medical jurisprudence is given each year at the Long Island College Hospital, Brooklyn, my letter was written only to correct your error

In The Journal, October 6, p 1116, Dr Leffmann refers rather sarcastically to my letter of September 8 I had no intention of discussing the value of instruction in medical jurisprudence as it is taught or the merits of any one particular course The course I referred to, however, does consist of exactly what Dr Leffmann mentions "Questions of ethics, general and legal, limitations of professional duties and rights, and cognate questions." And are not these things just what comprise medical jurisprudence?

I must confess that I was not aware that medical jurisprudence includes "practical instruction in the determination of the cause of death" If that is what medical jurisprudence consists of, then every medical college in New York teaches it. Probably New York and Philadelphia disagree on this point I agree with Dr Leffmann that it is the medical man who should give "instruction in the determination of the cause of death" And it is the medical man who does give such instruction in the medical schools of New York, given by the department of pathology

Each school in New York has abundant material for this purpose, and uses all it has in affording the students an opportunity to see, examine and autopsy a large number of bodies each year, under the direction of the professor of pathology Surely the men who hold such positions in the larger medical colleges, even if at the time they are not "coroner's physicians" are fully as competent to give "practical instruction in the determination of the cause of death"

Walter T Dannreuther, M D

Marriages

Alfred A Hermann, M.D, Newark, Ohio, in Chicago, September 29

George B Wood, M D, to Miss Helen Foss, both of Philadelphia, October 2

Frank Keagy M.D, to Miss Martha Bennett both of Altoona, Pa., September 20

Ralph M Tidd, M.D to Miss Nettie E Whetson, both of Clark, Pa, September 24

James Henry M D, to Miss Leona Reeves, both of Grand Rapids, Mich, September 26

A David Willmoth, M D, to Miss Edna Cralle, both of Louisville Ky, September 27

Archer W Sims, M.D, to Miss Charlotte Badger, both of Birmingham, Ala, September 27

Haywood Bert Bartholomew, M D, to Miss Madge Tison Hurst, both of Denver, October 1

William Fredfrick Baker, M.D, Birnamwood, Wis to Miss Inez I Powle, September 22

C J Altmaier, M D, Rudolph, Ohio, to Miss Ada Mae Henry of Columbus, September 26

Harry Edward Clyde, M D Evanston, Ill, to Miss Jennie Mae Rothrock of Chicago, October 3

Edward M Gans, M D, Eveleth Minn, to Miss Genevieve Wolf of Stillwater, Minn, September 26

Isaac E Van Hoesen, M D, Coxsackie N Y, to Miss Marie A Gauger, at Albany, N Y September 26

William Lynn Wilson M D to Miss Marguerite McConnell, both of St. Joseph Mich, September 22

Edwin B Kenner M D Galveston Texas to Miss Lulu Shumaker of Warrensburg Mo September 27

Arthur W Strout M D Gardiner Maine to Miss Delia May Swain of Farmingdale Maine, September 26

Ellis Jeaking Chapman M D to Miss Ida Mae Hutchinson both of Bridgeton, N J, at Shiloh August 30

Roy C Faust M D, Salem S D to Miss Grace Bates of Pilot Township, Cherokee County Iowa September 18

Deaths

Francis J McQueeney, M.D Harvard University Medical School, Boston, 1889, a member of the American Medical Association, Massachusetts Medical Society, Boston Medical Library, American Association for the Advancement of Science, American Geographical Society and Harvard Medical Alumni Association, high medical examiner of the Catholic Order of Foresters of Massachusetts, a police surgeon of Boston, died suddenly at his home in that city, October 1, from heart disease, aged 47

William T Skinner, M.D University of Maryland School of Medicine, Baltimore, 1870, a member of the American Medical Association, and a member and president in 1888 of the Delaware State Medical Society, one of the most prominent physicians of Delaware, and a resident of Glasgow was killed in a runaway accident near Porter's Station, September 29, aged 64 His daughter, who was with him in the carriage, was also killed

Henry Elmer Musser, M D Jefferson Medical College, Philadelphia, 1875 a member of the Medical Society of the State of Pennsylvania and the Lancaster City and County Society died suddenly at his home in Witmer Pa September 22 from angina pectoris aged 54 At a meeting of the county society resolutions were adopted placing on record its appreciation for Dr Musser and its sympathy for his family

Robert H Sturgeon, M D Chicago Medical College, 1891 one of the most prominent practitioners of the upper peninsula of Michigan, assessor and treasurer of the village of Iron River for two terms, died at his hospital in Iron City September 28, from injuries received in a railway accident three days before, aged 47

Sylvester S Burrows, M D University of Michigan Department of Medicine and Surgery, Ann Arbor, 1853 who represented Ashtabula County, Ohio in the legislature 25 years ago and was afterward superintendent of the State Asylum for the Blind, Columbus, died suddenly at his home in Geneva, September 28, aged 79

Henry Frank Conover, M.D Northwestern University Medical School, Chicago, 1904 of Crivitz, Wis while attempting to quiet a crowd assembled at a charivari at the home of a neighbor, October 3 was accidentally shot in the leg the femoral artery being severed, and died 30 minutes later, aged 25

Franklin B Ferguson, M D Medical School of Maine, at Bowdoin College, Brunswick, 1852 a member of the American Medical Association and of the Maine Medical Association one of the most prominent physicians of Hancock County Maine, died at his home in Deer Isle September 21, aged 78

Sirvilla A. Bennett, M.D Medical School of Maine at Bowdoin College, Brunswick, 1855 a veteran of the Civil War, and for several years a member of the board of health of Norway Maine died at his home in that city September 20 after a short illness, aged 77

Mark Emerson, M.D Cleveland Medical College Medical Department of Western Reserve College 1853 of Half Moon Bay, a resident of California for 50 years died in Redwood City, September 21, six days after amputation of the leg for septicemia, aged 74

John C Beekman, M D New York University New York City, 1882, of New York City one of the consulting physicians to the Harlem Hospital died in Atlantic City N J September 28, from heart disease, after an illness of one week aged 48

Edward Louis Buchart, M.D Tulane University of Louisiana Medical Department New Orleans 1903 a member of the Vanderburgh County (Ind) Medical Society died suddenly from heart disease September 25 at his home in Evansville aged 27

James Moffitt, M.D Rush Medical College Chicago 1868 who retired from practice in 1880 on account of ill health and has been an invalid for the past 18 years died at his home in Monticello Ill September 21 from uremia aged 66

Walter W Routh, M D Pulte Medical College Cincinnati 1887 health commissioner of Duluth in 1894 and 1897 died in Pasadena Cal, September 27 from tuberculosis after an illness of eight years, aged 50

C L Clay, M.D Kentucky School of Medicine Louisville 1876 a practitioner of McLennan County for 30 years died at his home in Moody Texas September 27 from typhoid fever after a long illness

Butler Cooper, M D Iowa Eclectic Medical College, Des Moines, 1888, health officer of Ankeny, Iowa, died at his home in that city, September 27, from tuberculosis, after a long illness, aged 39

George F Hand, M.D New York Homeopathic College and Hospital, New York City, 1865, of Binghamton, N Y, died in Brooklyn, September 27, after an operation, aged 63

John B Simpson, M.D Medical College of Georgia, Augusta, 1861, died at his home in Prosperity, S C, September 20, after a lingering illness, aged 70

Association News

NEW MEMBERS

New members of the American Medical Association for the month of September, 1906

ALABAMA

Baird R H. Cullman
Donehoo J H Ethelville.
Langley O V Camp Hill
Martin, A. P Cullman
Swann Edward Sprott.
Taylor A S, Mobile.
Waldrop R. W Bessemer
Zurmehly S L. Bridgeport.

ARIZONA.

Pennell F C Roosevelt.

ARKANSAS

Quidor J E Argenta.
Short, Z N Hot Springs

CALIFORNIA.

Adams P A. Los Angeles
Baker Fred. San Diego
Bering R. E., Tulare.
Briggs, E E Watsonville.
Conlan F J S, San Francisco
Galbraith, Alex. Oakland
Gibbons H W San Francisco
Holbrook G S. San Francisco
Jackson J A Hollywood
Jones, J T Grass Valley
Mead, L. D Byron Hots Springs.
Simmons H M. San Francisco
Tucker, G E., Riverside

COLORADO

Hazlett, H W Paonia.
Rowe, M J Denver

CONNECTICUT

Chaffee. J S Sharon.
Littlejohn P D New Haven

DISTRICT OF COLUMBIA.

Bain S B Washington
Dunlop John Washington.
Ruedy, R. C Washington.

FLORIDA.

Williams J F Monticello

GEORGIA.

Arnold J T., Parrott.

ILLINOIS

Babb Helen Springfield
Baxter A. J Astoria.
Benson, E O Chicago
Colbourne J A. Pontiac.
Colby C. P Springfield.
Combs, G W Ridgway
Connett, J E Lawrenceville
Corbus H L. Kankakee.
Culhane T H Rockford.
Cummins, J S Rosiclare
Davisson A. W Peoria.
Dinges H A Red Bud.
Ferry, L. A Geneseo
Gerould T F Centralia.
Hassett, J J McLeansboro
Heintz E L. Chicago
Hager Daniel S Chicago
Horine E S., Colfax
Hubbard C. M., Virginia.
Huston J W Virginia.
Kelly J W, Springfield.
Kraft, O H., Chicago.
Lovewell C. Hubart Chicago
Mannon J H Kewanee
Mitchell W C. Rock Island
Morgan F B., Cornell
Morgan F R. Towanda.
Parish. L N., Harrisburg
Quist F J Chicago
Rawlins B L., Chicago
Ritchey R. M. Menard.
Runte, Janet Ede Chicago
Songer W E Menard.
Stotz C F Chicago
Taylor J F Buda
Thompson T W, Xenia.
Webb W J Chicago

INDIANA.

Barnes, C A. Greenfield.
Bopp H W, New Salisbury
Cunningham J M, Indianapolis.
Dixon H T Evansville
Ford K. C Indianapolis
Garrett, J D Indianapolis
Hoskins, W D Indianapolis.
House J W Indianapolis
Leonard H S Indianapolis
Moschelle J D, Indianapolis
Robinson W B., Indianapolis
Smith L. W Liberty Center
Thompson A. A. La Paz.
Weil H J Indianapolis

INDIAN TERRITORY

Conger H A., Duncan
Henderson C F S McAlester
Kendall, W L., Durant.

IOWA.

Boice, J C. Washington
Cary F T Colo
Cooling W A., Wilton
Hansell Wm Ottumwa.
Huband C E. Ottumwa.
Hull J H Washington
Hullinger J D Clinton
Joynt M J Jesup
McFall W O, Hiteman
Onsum, E Waukon
Price, A. S Des Moines
Syp W W Centerville
Tapper, G W Rowley

KANSAS

Brown G H Chanute.
Dunning Chas Arkansas City
Cabriel G W Parsons
Hood T A. Garnett.
Johnson S D Chanute.
Mains J R. Whiting
Martin Mary S. Coffeyville.
Moore R. M Olathe.
O Connor B R Grenola
Smith Albert Parsons.
Surber C. C Independence.

KENTUCKY

Cook O C Crayneville.
Duerson C. B Mt. Sterling
Fox J E Levias
Francis W R Bowling Green
Gardner W F Sheridan
Koehler F W Louisville
Kleiser A. H Eminence.
Trisler J W Marion

LOUISIANA.

Schiro Salvatore New Orleans

MARYLAND

Brace C. H., Cumberland.
Freedom A. G Baltimore
Linthicum O M., Rockville.

MASSACHUSETTS

Frost, E. C Brockton
Johnson, P P Beverly
McCormick C. J Waltham.
Schroeder M. C. Boston.

MICHIGAN

Barrett, F E. Kalamazoo
Crotser L. S Petoskey
Eaton D H Kalamazoo
Eaton S R. Battle Creek.
Foster I C Albion
Green G W, Dowagiac.
Haughey W H., Jr, Battle Creek.
Howell D C. Onaway
McLarty, A. A. Manistee
Read, A J Battle Creek.
Riley, W H, Battle Creek
Stone W A. Kalamazoo
Stripp A E Charlevoix.
Van Sickle, F A. So Frankfort.
Wright, W J, Gregory

MINNESOTA.

Abbott, C. U, Aurora.
Adair F L. Minneapolis.
Dreisbach, Norman Minneapolis
Nissen Henrik Minneapolis.
Reay G R Hokah
Robilliard, W H, Faribault.
Smersh, F M. Owatonna.

MISSISSIPPI

McNeal, B F, Leota Landing
Ullman, J S., Natchez

MISSOURI

Bennett F W St Louis.
Bondurant, W E H Memphis.
Booth H A., Pacific
Briegleb C F, St. Clair
Davis, A. L, Arbela.
Downing T J New London.
Ferrell J J Owensville.
Geisinger E J Unionville.
Lopp J E, Jefferson City
Malcolm P M Sikeston.
Robertson, W M, St. Louis.
Weiss F H Kansas City
Williamson C W Poplar Bluff.
Zieber W H Queen City

NEBRASKA.

Conaway J B York.
Plehn F W, Burchard

NEVADA.

Masterson J R., Dayton

NEW JERSEY

Ames, E H Jersey City
Harbert, G E East Orange.
Hardenberg D S Jr Jersey City
Seibert E. C., Orange.

NEW YORK.

Andrews R. M., Bergen
Allen A. H Gouverneur
Allen B P, Oriskany
Baker, F J Lockport.
Beaupre, J O A, Malone.
Bibbins. C N Watertown
Blood N D Auburn
Breese A. B, Syracuse.
Briggs, C M Fairport.
Brooks, N O., Oneida.
Burch, J H, Baldwinsville.
Clark, R. Brooklyn.
Clowe C F, Schenectady
Collier, E J Amsterdam.
Coss E. M Cattaraugus.
Deck O H, Herkimer
Dickert, J G Brooklyn
Donovan P M Canandaigua.
Dow F F Rochester
Elting A. W, Albany
Finch H C., Broadalbin.
Fitch, R. R., Rochester
Geyser A. C. New York.
Hammond, C N, Elmira
Hennessy W J Palmyra.
Hoyt, H A Watertown
Hudson W T Auburn
Hurrell Louise M., Rochester
Hyde, R. F Plattsburg
Ilett A. E. Watertown
Johnson, D F Newark
Johnson H D New York.
Johnston A. M Utica.
Kane J F Olean.
Kaufmann Jacob New York.
Kellow W J Watertown.
Knight. Robt. Seneca Falls.
Lapp E H., Williamson
Lester F W, Seneca Falls.
Martin M. E., Attica.
McAveney W J Brooklyn.
McIlmoyle H A Ogdensburg
Morton E S Brooklyn
Murray Archibald Brooklyn.
Nock T G Rome.
O Connor J C. Rochester
Oliver G H Malone
Osterhout, Elijah Newburgh.
Paul G P Troy
Pfarre E R., New York.
Preston Frank Greene
Roos G W., Wellsville
Ruggles E Wood Rochester
Russell W D New Hartford.
St John H L., Rochester
Sanford, M J, Suffern
Seeley C R Attica.
Selover C W Stanley
Shaw H. L. K, Albany
Shea, P H, Canton
Smith, C E, Whitesboro
Smith, W G Walton
Strasenburgh, F A. Avon.
Waller P G, New Baltimore
West, C. B Central Islip
Whitbeck J F W Rochester
Willard, E S Watertown.
Wright, H B Skaneateles.
Zimmer John Rochester

OHIO

Adams Thos, Cleveland.
Ash R. C Ashland.
Barton R. S New Philadelphia
Calhoun G E Uhrichsville
Carson, F D., Benton
Clark C S Leesville
Eddy, R C Cleveland
Emery W F Ashland
Fulwider, R M West Liberty
Green H S Cardington
Hubbell W B, Elyria
Jones A W, Westerville.
Jones D K. Canal Fulton.
Lemon W L. Cleveland
Leslie, F A Toledo
Mayhugh, G H Westerville
Merriam, W H Fredericksburg
Millikin, Emma, Ontario
Perry, W H Van Wert.
Pyle J S, Toledo
Rice, R A. Columbus
Richardson E O Marion
Rosenthal H A Bridgeport.
Rusk R P, Cadiz.
Smith H H Lexington
Stockton L. D Carrollton
Stokes C C Rushylvania.
Stout W C Killbuck
Webster G E Kingsville
Widdecombe Emily J Kent.
Williams J R., Carrollton
Wolf, C P Massillon

OKLAHOMA

McLean G D Oklahoma City
Taylor G W El Reno

OREGON

Dammasch, F H Portland

PENNSYLVANIA.

Baer B F, Jr, *Philadelphia*
Bair C H Homestead.
Bateson J C Scranton.
Comroe, J H, York.
Dunnick, M. C, Shrewsbury
Harter G A. Maytown
Havens J G W Philadelphia.
Hesser A. J, Pittsburg
Hickson, W J Pittsburg
Lindeman C. E Pittsburg
Mallon, E A Philadelphia.
Myers N R, Wanamie.
Pierce, A. M. West Elizabeth
Reeser Richard, Columbia.
Smith, Stanley Pittsburg
Williams, C. L. Harmonsburg

SOUTH CAROLINA.

Cudd A. D, Spartanburg
Jervey A. J Charleston
McCormack J R Olar
Posey, E O Woodruff.

SOUTH DAKOTA.

Giffin A M Rapid City
McKechnie W Egan.

TENNESSEE

Allen P McF West Nashville.
Barr R. A, Nashville
Dixon W C, Nashville.
Eblen J G Lenoir City
Graham Frank Memphis.
McCabe W M, Nashville.
Perry Alexander Nashville.
Stanley J B Memphis.
Walker G M Soddy
Washburn P A. Nashville.

TEXAS.

Boyd J E Aquilla.
Cleary P J A San Antonio
Herring Isaiah Prairie Grove.
Jameson G M, Dublin
Lindsay A H, Paris
Scott, Z T, Clifton

UTAH

Nelson J B Monroe

VERMONT

Bosworth Robinson Barton
Ricker W G Wells River

VIRGINIA

Amiss F P Harrisonburg
Armstrong G Staunton

Baird T E., Norfolk
Baker, S J, Manchester
Brunk O C. Charlottesville
Irvine J S, Danville.
Rice, B A, Forest Depot.

WASHINGTON

Palmer, D H Seattle.

WEST VIRGINIA.

Curry, A. W, Ronceverte
Dix, Sherwood Williamson
McKinney, L. L. Burnsville.
Oates, T K. Martinsburg
Peck S P, Hinton
Perry O L. Elkins
Stump E H Philippi.
Woofter, A. J., Weston.

WISCONSIN

Flatley M A Antigo
Lenfesty J P, De Pere
O Connor, D J, Appleton

Queries and Minor Notes

Anonymous Communications will not be noticed Queries for this column must be accompanied by the writer s name and address but the request of the writer not to publish name or address will be faithfully observed

BREWERS GRAINS AS FOOD FOR CATTLE

——— N J, Sept. 26 1906

To the Editor —Can you or any of your readers inform me why wet brewers grains are not allowed by some municipalities to be given in the dairies which they license for milk supply? Surely these grains form a useful and comparatively inexpensive part of the cow s ration especially where it is difficult to grow alfalfa and if carted from the brewery frequently and in small quantities (by the farmer) and properly salted should be subject to little change Is it not a fact that in those places where dried brewers grains are allowed the farmers wet them and leave them soaking for twenty four hours or longer? I should like to see a discussion or expression of opinion on this subject, for I am health officer in my city and in going around the dairies have seen that a good many farmers use these grains and I should be disinclined to propose a prohibitive clause in our ordinances unless there is a really good reason for it. S

Answer.—Average analyses show that brewers grains contain more than 20 per cent. albumin from 40 to 50 per cent. carbohydrate and more than 6 per cent. fat. In the wet state more than 75 per cent. water is present. If allowed to remain in a moist condition lactic acid fermentation sets in which later is supplanted by butyric acid fermentation Finally after a certain amount of butyric acid has accumulated, putrefaction begins which by the production of ammonia, neutralizes the lactic and butyric acids and imparts an alkaline reaction to the mass of grains The odor is then offensive and the food value diminishes as the proteid contents are decomposed by the putrefactive bacteria. In this state if not positively injurious, brewers grains are at least of little food value According to Dietrich, 100 pounds of barley yield 26 pounds of dry and 110 pounds of mo st grains About 65 per cent. of the nitrogenous, 20 per cent. of non nitrogenous extract, two thirds of the ash, and almost all the phosphoric acid pass into the refuse. If this refuse is dried without being pressed it loses none of its valuable constituents. Soaking for one-half hour in hot, or for from five to six hours in cold water restores the dried grains to their original moist condition. There is no disagreeable odor and no sour taste in this condition During the stage of lactic acid fermentation it is questionable whether the grain is injurious for use as food. Silage which has been shown to be at least equal to fresh fodder also contains lactic acid Legitimate objection however can be raised if brewers grains are fed in a state of putrefaction Feeding experiments indicate that when cows are fed with brewers grain even in large amounts and in the early stages of fermentation detrimental results do not follow (New York Agricultural Experiment Station 1884) At present dry brewers grains are listed among the licensed feeding stuffs in Wisconsin One experimenter (A. S Alexander) found that the flow of milk increased with brewers grains as food, and that the quality of the milk was good In conclusion it may be said that the considerable amount of nutrient material in brewers grains makes them when fed to cattle in proper condition of great value Brewers grains alone should not be expected to furnish cattle with a suitable amount and quality of food any more than any other food substance and the chief objections advanced against the use of brewers grains are also applicable to many other food materials If given in conjunction with other feeding stuffs and before putrefaction has set in brewers grain must be considered a valuable and cheap food for dairy cattle No detrimental effect has been demonstrated either on the health of the animals or on the milk produced by them On the other hand distillery refuse containing considerable quantities of alcohol seems to be very undesirable

EMULSION OF SILVER IODID

West Grove Pa Sept. 28 1906.

To the Editor —Some time ago I saw a formula for emulsion of silver iodid in The Journal but I have mislaid the number containing it. Will you kindly give me the formula and greatly oblige Dr. W B Fwing.

Answer.—This formula appeared in The Journal A M A June 9 1906 page 1766 in chapter XXIV of The Pharmacopeia and the Physician. The formula is as follows

℞	Argenti nitratis		
	Potassii iodidi āā	gr xxiii	2
	Mucilago chondri (N F)	fʒvi	25
	Aquæ dest q s. ad	f℥iii	100

M Sig Use as an injection

The best method of preparing a finely-divided precipitate is to dissolve the potassium iodid in all of the water and to add the crystals of silver nitrate shaking well after each addition when the silver nitrate is dissolved add the mucilage and shake thoroughly once more The resulting mixture will represent approximately 3 per cent. of silver iodid If prepared in this way the weaker mixtures will require a correspondingly smaller amount of mucilage to hold the powder in suspension and mixtures below 1 per cent. may be dispensed without the addition of any foreign material.

WHAT IS A RESIDENT PHYSICIAN?

Hot Springs S D Oct. 4 1906

To the Editor —Will you through the columns of The Journal kindly define what is called a resident physician to a hospital?

F E. Walker.

Answer —The physician who lives in the hospital (or sometimes near by) who has the routine medical oversight of the patients and who is supposed to be within call during his hours of duty

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers U S Army, week ending Oct 6 1906

Hoff John Van R asst surgeon general granted 30 days leave of absence.

Havard, Valery asst. surgeon general left Washington D C en route to Newport News Va, for duty as chief surgeon Cuban expedition

Kean J R surgeon, left Washington D C. en route to Havana Cuba for duty

Crabtree Geo H asst surgeon left Ancon Canal Zone Isthmus of Panama on 6 weeks leave of absence

Morris S J asst surgeon reported for duty as transport surgeon of the *Sumner*

Eastman William R asst surgeon left Army General Hospital Presidio of San Francisco, on leave of absence for 10 days.

Woodruff Charles E surgeon returned to Plattsburg Barracks N Y from leave of absence

DeLaney M A. asst surgeon, returned to attending surgeon s office Washington D C from leave of absence

Harvey P F asst surgeon general returned to Governor s Island N Y from leave of absence

Buck C D., asst -surgeon left Fort Leavenworth Kans for the Army General Hospital Presidio of San Francisco

Raymond, H I surgeon left Columbus Barracks Ohio with troops for Fort Mackenzie Wyo

Lewis W F asst. surgeon returned from Chicago to his proper station Fort Sheridan Ill

Chamberlain W P asst surgeon left Jackson Barracks La on leave of absence for two months

The following named officers ordered to duty with expedition to Cuba

Havard Valery asst. surgeon general

Taylor Blair D deputy surgeon general

Johnson Richard W Birmingham Henry P Willcox Charles Frick, Euclid B and Clarke Joseph T surgeons.

Geddings, Edward F Hartsock Frederick M, Truby Willard F Brooks William H Little, William L. Church James R Webb Walter D Allen John H, Thomason Henry D Gilchrist Harry L. Bevans James L. Davis William T., Truby Albert E Patterson Robert U Hansell Haywood S Fauntleroy Powell C Cowper Harold W Kieffer Charles F Koerper Conrad L. Quinton William W., Miller Reuben B Webber, Henry A., Wilson Compton Duval Douglas F Tefft William H Stone John H Shook Jay R Whitcomb Clement C Smart, R., Richards Robert L. Bartlett Cosam J Marrow Charles E. and Miller Edgar W asst surgeons

Branch Frederick D contract surgeon ordered from Fort Wood N Y to Fort Totten N Y for temporary duty

McAllister John A dental surgeon left Fort Rosecrans Cal and arrived at the Presidio of Monterey Cal for duty

Wing Franklin F dental surgeon returned to Fort D A Russell Wyo from leave of absence.

Stone Frank P., dental surgeon returned to Fort Sam Houston Texas from leave of absence

Boak S Davis dental surgeon left Columbus Barracks Ohio on leave of absence

Wolven F Homer dental surgeon left Fort Jay N Y and arrived at Fort Monroe Va. for duty

Mason George L., dental surg., left Fort Fremont S C and arrived at Fort Moultrie S C. for duty

Navy Changes.

Changes in the Medical Corps U S Navy for the week ending Oct. 6, 1906

Wentworth A P surgeon detached U S R S *Franklin* Navy Yard Norfolk to the *Louisiana* sailing Oct. 4 1906

Evans S C surgeon detached *Louisiana* and from treatment at the Naval Hospital Boston and granted sick leave of absence for two months.

Lovering P A., medical inspector detached U S Naval Medical School Washington D C to command the U S Naval Hospital Norfolk Va.

Brooks F H, asst. surgeon when discharged treatment at Naval Hospital Newport, granted sick leave of absence for six weeks.

Du Bose, W R. medical inspector detached duty as assistant to the Bureau of Medicine and Surgery Navy Department, Washington D C etc. to command U S Naval Hospital, Yokohama Japan sailing Oct. 20 1906

Halloway J H P A. surgeon, to the *Nevada*

McLean A. D P A. surgeon detached Navy Recruiting Station Cincinnati Ohio to duty at Navy Recruiting Station Detroit.

Woodward J S asst.-surgeon to Navy Recruiting Station Cincinnati Ohio

Boyd John C medical director, to duty in command of the U S. Naval Medical School Hospital in addition to his present duties

DeBruler J P asst. surgeon to duty at U S Naval Medical School Hospital in addition to present duty

Public Health and Marine-Hospital Service

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending Oct. 3 1906

Wertenbaker C. P surgeon extension of leave of absence for seven days from September 22 granted Surgeon Wertenbaker amended so as to read for four days only

Wickes H W, P A. surgeon directed to proceed to Stapleton N Y and report to the medical officer in command for duty and assignment to quarters, on being relieved from duty at Reedy Island Quarantine Station by P A. Surgeon W A. Korn

Lavinder, C H P A. surgeon directed to proceed to Wilmington N C and assume command of the service on the arrival at Stapleton N Y of P A. Surgeon H W Wickes

Hobdy W C P A surgeon granted leave of absence for ten days from October 1

Stansfield H A. P A. surgeon relieved from duty at Baltimore, and directed to proceed to Havana, Cuba reporting to P A Surgeon R H von Ezdorf for duty

Salmon T W asst. surgeon granted leave of absence for seven days from September 29, under Paragraph 101 of the Regulations

McKeon F H, asst. surgeon, granted leave of absence for one day

Fogarty J N acting asst. surgeon granted leave of absence for one day September 18

Coldsborough, B W acting asst-surgeon, granted leave of absence for two days from September 29

Hicks W R. acting asst. surgeon granted leave of absence for ten days from September 22.

Watkins McDonald acting asst. surgeon granted leave of absence for one day

Allen G C pharmacist, leave of absence granted Pharmacist Allen for twenty three days from August 4 amended to read twenty three days from August 5

APPOINTMENTS

Dr Friench Simpson of Texas commissioned (recess) as assistant surgeon Public Health and Marine-Hospital Service, October 1

Dr Robert A Herring of Mississippi commissioned (recess) as assistant surgeon Public Health and Marine-Hospital Service, October 1

BOARDS CONVENED

Boards of medical officers were convened to meet on Oct. 10 1906 for the purpose of making physical examinations of applicants for cadetships in the Revenue Cutter Service at the following named places Washington D C Asst Surgeon General J W Kerr chairman Asst.-Surgeon J W Trask recorder, Boston Surgeon R M Woodward chairman P A. Surgeon B S Warren recorder New York, Asst. Surgeon J S Boggess, chairman Acting Asst Surgeon R. Knowles recorder Philadelphia, Surgeon J M Gassaway chairman Asst Surgeon H McG Robertson recorder Baltimore Surgeon L. L. Williams chairman Acting Asst. Surgeon —— recorder Chicago Surgeon G B Young Chairman Asst. Surgeon E. T Olson Recorder Detroit Surgeon Fairfax Irwin chairman Asst.-Surgeon K. A C Wollenberg recorder

Health Reports.

The following cases of smallpox, yellow fever cholera and plague have been reported to the Surgeon General Public Health and *Marine-Hospital Service, during the week ended Oct. 5 1906*

SMALLPOX—UNITED STATES

Louisiana New Orleans Sept. 15-22 1 case, imported

SMALLPOX—FOREIGN

Canada Toronto Sept. 8-15 1 case.

Ecuador Guayaquil Aug. 1-31 39 deaths.

France Marseilles, Aug 1 31 6 deaths Paris, Aug. 13 15 11 cases.

Gibraltar Sept 2 9 1 case.

Great Britain Liverpool Sept. 8-15 1 case.

Italy General Aug 23 Sept 13 12 cases.

Russia Odessa, Sept. 1-8 3 cases 1 death.

YELLOW FEVER.

Cuba Habana Sept. 29 1 case, Santa Clara Province, Oct. 2 1 case 1 death

Mexico Merida Sep 16-22 3 cases, 2 deaths Tierra Blanca, 1 case Vera Cruz, 1 case.

CHOLERA—INSULAR

Philippine Islands Manila, Aug 4-18 153 cases 128 deaths Provinces 1 104 cases 856 deaths.

PLAGUE.

Brazil Campos Aug 14 18 7 deaths

China Hangchow Aug 18-25 present Hong Kong July 7 Aug 11 33 cases 34 deaths

Egypt Alexandria, Sept. 2 13 6 cases 3 deaths Beni Souef Province Sept. 11 1 case 1 death Suez, Sept. 5-10 6 cases 4 deaths

Mauritius July 25 Aug 15 5 cases 4 deaths

Peru Lima, Aug. 17 20 present.

Turkey Trebizond Aug 8 29 10 cases 3 deaths

Miscellany

The Blood in Gastric Cancer—Baradoulin examined the blood in 10 patients with cancer of the stomach The proportion of red blood corpuscles was much diminished and the hemoglobin percentage very low, lower than corresponded to the reduction in the numbers of reds There was always leucocytosis, more intense the more advanced the case The leucocyte formula was normal at first, but later the lymphocytes increased while the polynuclears diminished The leucocytosis of digestion was present in only 2 cases In both of these, free HCl was found in the stomach content He also noticed the absence of leucocytosis of digestion in case of cancer in other parts of the body (breast, upper jaw, rectum), and he thinks that this is due to the fact that the lymphatic glands, being constantly irritated by the cancer toxins, cease to respond to such a mild excitation as the process of digestion In case of gastric ulcer the leucocytosis of digestion can always be determined He suggests that in doubtful cases the absence of hyperleucocytosis during digestion may serve as a positive sign for differential diagnosis, its absence indicating the presence of cancer His communication is published with casuistic detail in the *Russky Vrach*, No 28, 1906

Abdominal Fissure and Double Genitalia.—In the *British Medical Journal*, Aug 25, 1906, E Chill reports a case in which the premature rupture of the membranes was followed by a tedious labor ending in inertia uteri, which necessitated delivery by forceps The liquor amnii was of a peculiar tenacious consistence, dirty black color, staining deeply as it escaped with each pain The mother made an uninterrupted recovery The child was an eight months' fetus and lived for some hours after its birth The whole of the abdominal wall was absent from about an inch below the point of the sternum to within an inch of the pubic bone, with the exception of a small irregular flap of skin which contained the umbilical cord The viscera protruded freely through this opening There was no great omentum The external genitalia were duplicated and separated from one another by a clearly defined central space of skin (raphe) The urogenital and anal orifices on both sides were extremely rudimentary and suggested early intrauterine arrested development There were present two shallow sinuses, with raised labia majora in each and two anal depressions below the perineum on either side The organs on the left of the raphe were rather more developed than those on the right With the exception of these abnormalities the child was in every other respect well formed, and cried lustily at birth

Another Test for Detection of Occult Blood—I Boas of Berlin describes in the *Centrbl f innere Med*, No 24, 1906 the application of Storch's reagent to the detection of invisible blood in the stools and stomach content The test appears to be about as sensitive as the turpentine and aloin tests but less so than Adler's benzidin reaction The latter is said by O Schumm to be too sensitive, sometimes indicating the presence of blood when none exists. The reaction described need not supplant those at present in use, but may prove useful when the findings with the other tests are dubious or contradictory Boas has recently been using it almost exclusively and says that he has every reason to regard it as an easily applied and reliable test. It is applied as follows The material is treated in the usual way with as little glacial acetic acid as possible (about 20 drops), and extracted with ether To the ethereal extract 1 to 2 drops of a very dilute solution of paraphenylendiamin hydrochlorid (1 to 200) are added. As the reaction occurs very slowly if at all in the presence of acid, 1 c.c. of one half normal alcoholic solution of potassium hydroxid is added to the mixture and then 10 to 15 drops of a 3 per cent solution of hydrogen peroxid There now appears immediately at the bottom of the test tube, after a little shaking, a characteristic olive green color Especially characteristic is the olive green ring between the ether and the hydrogen peroxid layers, while the supernatant liquid shows a more or less intense violet color due to the action of the reagent. The green color is very evanescent and soon changes to a more or less deep dark violet, according to the amount of blood In stools containing much bile or urobilin it is advisable to extract with alcohol ether according to the method of O Schumm before applying the blood test In the absence of blood the green color either does not appear at all or only after long standing Numerous control comparative trials of the new test and those previously used have shown completely concordant results

Cancer of the Pancreas.—Two cases of cancer of the pancreas are minutely described by Lubenetzky and Phaphanoff in the *Russky Vrach*, Nos 12 13 1906 The first patient entered the hospital complaining of weakness, palpitations, nausea, loss of appetite, edema of the feet and ascites No syphilis or alcoholism After tapping, a tuberous, solid and very painful tumor could be palpated in the hypogastrium on the median line, but the sides of the tumor were covered. It was immovable during respiration, and inflation of the stomach did not change its position The stomach contents showed mucus, no HCl, traces of lactic acid, and Sahli's test with desmoid capsules containing iodoform showed absence of iodin in the saliva even twenty five hours after the test The feces were apparently normal The urine, 800 c.c, was not examined with chemical tests There was no glycosuria nor excess of fat or nitrogen The further course was accompanied by a distaste for meat pains in the hypogastrium, rapid reaccumulation of the ascites (the next day), nausea and vomiting immediately after meals, and, later, even fasting Autopsy showed cancer of the pancreas with involvement of the duodenum, pylorus, omentum and transverse colon In the second case there was pain in the epigastric and umbilical regions, increasing after meals, also diarrhea, with fair appetite, weakness, but no syphilis or alcoholism, and no ascites The abdomen was enlarged and in the upper and middle portions of the abdomen along the median line, a tumor could be felt as large as a watermelon, immovable during respiration. The stomach did not contain HCl, but lactic acid was found in normal quantities The tumor was diagnosed as a cyst of the pancreas, and cancer as the patient showed progressive decline The operation did not improve his condition and he died several months later Autopsy confirmed the diagnosis of cyst and cancer of the pancreas, with metastases in the spleen

Fractures in the Insane—J F Briscoe (*Clinical Journal*, London, August 8), has endeavored to test the truth of the general assumption that the bones of the insane are peculiarly liable to fracture, and especially that the ribs are peculiarly fragile by sending out a circular letter of inquiry to 50 asylums in Great Britain and analyzing the answers received The general belief, as indicated by the replies, is that fractures are not especially frequent among the insane, and although some observers have noted an unusual fragility of the bones, either from clinical observation or at postmortem, the majority do not seem to think that the insane are in any way peculiar so far as the osseous system is concerned, unless the peculiar fragility is the result of improper nutrition, advancing age, or possibly general paralysis While trophic changes have been recognized as a result of nervous disease, there seems little reason for giving that as an explanation in the case of the bones, as the nerves entering the bones are mostly distributed to the blood vessels and if they influence nutrition, probably do so through the distribution of blood There is need of more careful examination of the blood vessels of the bones in these cases The bones of the insane appear to heal as readily when broken as those of sane persons in general There is little reason for believing that the ribs are especially liable to softening and fracture One reason for the more frequent fracture of the ribs in the insane may be an original defect of structure and another is that they are especially liable to pressure in struggles that can not be avoided with the best of attendance For this reason, it is believed that a reasonable amount of mechanical restraint by the padded straight jacket would be preferable to the uncertain action of the arms of a male attendant under the provocation of a struggle

The Pathology of Chill.—W Ringrose Gore (*Clinical Journal*, London, August 8) divides bacterial diseases into infective, in which the bacteria are introduced from without the body, and those in which the bacteria are present in the body but become active only after some interference with the natural immunity The most frequent cause of the loss of immunity is *an alteration of the secretions brought about by* chilling the external surface The altered character of the secretions has been shown for nasal catarrh by experiments which demonstrate that the bacteria of nasal catarrh do not grow well in normal nasal mucus, nor will the ordinary bacteria of the mouth and nose increase if incubated in healthy mucus, but that all these organisms grow rapidly in the secretion from the first stage of catarrh As diseases which may be originated by chill he enumerates nasal catarrh bronchitis, pleurisy, pneumonia, rheumatic fever, and, in some cases, intestinal catarrh An important distinction between infective diseases and chill diseases, he states, is that an attack of the former confers immunity by an alteration of the blood while in the latter immunity depends on the protective action of the secretions, a renewal of the chill is followed by a renewed attack. The best method of prevention he believes is the hardening of the body by cold bathing and careful exposure

The Leech as a Means of Research in Regard to Toxic Causes—Cajal has long called attention to the advantages of the common medicinal leech for purposes of scientific research Its organs are so simple that they form practically a schematic diagram of the vital organs The blood to be examined is ingested by the leech by the natural route, instead of the unnatural process of intraperitoneal or other inoculation The changes in its neurofibrils are easily apparent and form a sensitive and reliable index of toxic action on the part of the blood ingested. R. Rebizzi, of Florence, reports in the *Rivista di Pathologia nerv e mentale*, June, 1906, a series of researches undertaken with the leech to determine the toxic cause of certain mental affections It has recently been established that the neurofibrils react like the chromatic substance *even to non elective stimuli, and this opens a wide field for* research in regard to the action of toxins Rebizzi announces among other points thus learned that dementia præcox in its early stages shows most decidedly the action of a toxic agent elective for the nervous system After the nervous system has been injured by the toxin, the latter always vanishes from the blood so that in this, as also in alcoholic psychoses the first intoxication and the permanent lesions it leaves are followed by no indications of the presence of an elective toxin in the blood later He is convinced that the causal toxin in the majority of mental affections is of exclusively intestinal origin *The task now is to determine which bacteria in the* intestinal flora are responsible, and to learn how to keep them under control.

Mortality Among Athletes—Dr Robert F Coughlin, Brooklyn N Y, has been studying the fatalities in athletic games and deaths of athletes in 1905 In the *Medical Record*, June 2 1906, he records 128 deaths of which 78, or about 61 per cent., were due to accidents, distributed as follows Football 28, base ball, 12, horse racing, 9 boxing, 6, gymnasium exercise, golf polo, bicycle coasting, handball, hammer throwing and wrestling, 3 each Of the 50 deaths due to disease, 9 resulted from cerebrospinal meningitis 8 from cardiac diseases, 7 each from pneumonia and pulmonary tuberculosis 5 from Bright's disease, 4 each from appendicitis and typhoid fever, 1 each from apoplexy, suppurative tonsillitis splenic anemia and senility, 2 were cases of suicide The number of deaths due to cerebrospinal meningitis was exceptional as this disease was epidemic last year The average age at death of the athletes dying from accident was 20 years that of the athletes dying from disease, 31 years Among the causes of fatalities from accidents were Abdominal injuries dislocation of spine and paralysis fracture of skull cerebral hemorrhage shock, cardiac failure heat exhaustion concussion of brain fracture of spine acute peritonitis Dr Coughlin's conclusions are that athletes are specially susceptible to cardiac lesion pneumonic and infectious diseases generally that football is the cause of an appalling number of serious injuries and fatalities, and that the aim of athletics should be not to cripple men but to improve them

Transmission of Disease by Pets—THE JOURNAL commented on "The Pathologic Cat," July 21, page 209 Another warning on the danger from pet cats and dogs is from Remlinger and Nouri of Constantinople, who relate instances from their experience in which the strictest measures of isolation and disinfection were nullified by a pet cat allowed to roam through the house They state "There is scarcely a hospital or ward without its cat or cats, and they go from bed to bed and ward to ward seeking for tidbits and caresses which the convalescents are only too glad to bestow to while away the time" They describe in a communication to the newly founded journal, *Hygiène Gén et Appliquée*, experiments with cats whose fur was touched with cultures of various bacteria They found typhoid bacilli still alive and viable up to the seventeenth day after inoculation of the fur Diphtheria bacilli were viable up to the twenty fourth day, but were dead by the twenty-seventh, while anthrax bacilli lived and persisted indefinitely All these germs were found with unattenuated virulence as long as they could be cultivated from the cat's fur The results of similar tests on dogs were approximately the same The article concludes with the statement that fondling cats and dogs is an antihygienic habit Until the habit is abandoned for good, at least the hands should be washed with soap and water whenever one of these animals has been touched.

Lack of Legislation Regulating Practice of Medicine in Germany—The lack of legislation regulating the practice of medicine in Germany is explained by an interesting historical sketch of "Charlatanism in Germany", published in the last *British Medical Journal* It states that until 1869 Germany had a law regulating the practice of medicine, imposing a large fine or five months' imprisonment for the practice of medicine without being duly qualified. Another paragraph of the law imposed a penalty, ranging from $14 to $106, in the event of a medical man refusing his help in a case of danger or without sufficient excuse In order to obtain the repeal of this last obnoxious paragraph, the Berlin Medical Society agitated the repeal of the law *in toto*, and finally accomplished its purpose, thus throwing down all barriers against the unlimited practice of medicine, although no one was allowed to assume the title of "Arzt" (physician) except those duly licensed The profession in Germany has long rued its action in this matter

The Best Medical Text-Books.—If the text books most widely used in medical colleges are the best, considerable interest will attach to the summary, in *Medical Notes and Queries* of the text-books recommended in the catalogues of 58 out of the 67 medical schools belonging to the American Association of Medical Colleges The most commonly recommended books are as follows Anatomy, Gray, Cunningham, histology, Huber, embryology, Heisler, physiology, American, chemistry, Remsen, pathology, Stengel, bacteriology, McFarland, materia medica and therapeutics, Wood, Hare, medicine, Osler, Tyson, neurology, Dana, Church and Peterson, pediatrics, Holt, obstetrics, Hirst, gynecology, Dudley, medical dictionary, Gould, ophthalmology, de Schweinitz, surgery, American International, laryngology, rhinology and otology, Kyle, Dench, dermatology, Crocker, Stelwagon, hygiene, Bergey, Harrington, toxicology, Taylor

Book Notices

PNEUMONITE CRUPALE con speciale Riguardo alla sua cura By A. Serafini. Cloth. Pp 64 Price L. 2 50 Milan Italy Ulrico Hoepli 1900

This little monograph on pneumonia, a disease which in this country, at least, has become one of the chief causes of mortality, we take to be the most recent statement of the current Italian view on the subject The author says in his introduction that as a practical physician he has laid down what would seem to him the most rational principles of treatment and the methods which have given him the best results He has also reviewed more or less extensively the facts as to the etiology pathology, anatomy, symptomatology, etc., of the disease, and it may be taken as—for its size—a fairly exhaustive and critical discussion of the subject Serafini holds that in the greater number of the cases the pneumococcus of Fraenkel is the responsible germ, the others being effective in smaller proportions The contagion of the disease is recognized, though the importance of conditions affecting resistance is also noted and the effects of meteorologic conditions are not underrated. It would appear that in Italy the fall and spring are the seasons in which pneumonia is specially prevalent and its mortality highest, that of winter being noticeably less, except in certain localities The author is not inclined to recognize an abortive type of pneumonia which some authors have claimed exists Such cases he thinks are often more properly classified as manifestations of the influenzal infection The figures as to the mortality of pneumonia differ widely in different localities, from 4 per cent in some German figures to the 37 per cent. or 38 per cent of the Paris hospitals, and the well known high figures observed in some of our American cities The prognosis therefore is somewhat uncertain, especially in view of the possibility of complicating infections According to the author, jaundice is one of the most serious symptoms

The part of the most interest, as the title of the work would seem to indicate, is that devoted to treatment, which comprises nearly one third of the text Dr Serafini himself collaborated with Professor Pane in his earlier experiments with serotherapy, but his attitude on this matter is thoroughly impartial and judicial, and he advises against any too positive enthusiasm in regard to such methods Both the Pane and the Tizzoni sera are noticed and he seems to consider the latter even more unreliable than the former Among the drugs specially noticed as recommended and employed by various authorities are digitalis, alcohol, potassium iodid, creosote inhalations, formic acid, and the various expectorants, revulsives, etc. He has not seen quinin modify the disease apparently, except to increase the blood in the expectoration or to make it appear when it did not before The large doses advised by Aufrecht and in the Galbraith treatment are evidently not favored by the author

Considerable space is given to the subject of blood letting in pneumonia, which the author himself advises in a moderate way Subsequent injections of normal salt solution he considers not necessary with the ordinary amount of blood taken (200 to 500 grams) The rational treatment of pneumonia according to him, would consist in proper hygienic conditions of the sick chamber, keeping it at a temperature of about 20 C with pure air, opening the windows for this purpose in winter for a few minutes at a time, avoiding excitement, using regular and nutritious diet, generally of milk (3 liters of which daily, affording 1,830 calories, being sufficient for nutrition), plenty of fresh water, acidulated with orange juice if necessary, the use of a purge of calomel or castor oil and moderate amount of blood abstraction in the first stage by leeches, together with the use of diaphoretics, sedatives to relieve fever, cough, pain, etc. The same general treatment should be continued through the second stage, but a larger blood depletion, 300 to 500 grams, from the arm is advisable when the infection has reached its acme. In the third stage the liquid diet may be gradually changed to mixed, and expectorants employed, as seems desirable During the convalescence stage the ordinary tonics and tonic and reconstituent treatment generally is indicated. As regards the use of cardiac tonics he favors digitalis in generous doses when there is decided weakness and in severe cases injections of camphorated oil, one syringe every two or three hours of a 20 per cent solution and possibly the use of alcoholic stimulation

This work, like so many other of the Hoepli manuals, is a valuable digest of its subject, critically presented, according to the point of view of its author, and is not a mere uncritical compilation of the literature The references are numerous and show the author's wide acquaintance with the literature of the subject.

ELEMENTS OF GENERAL CHEMISTRY, with Experiments. By J H Long M S Sc.D Professor of Chemistry and Director of the Chemical Laboratories in the Northwestern University Medical School Fourth edition Revised and Enlarged. Cloth. Pp 443 Price $1.50 net. Philadelphia P Blakiston's Son & Co., 1906

While, as stated in the preface of this revision, "most of the added matter is given in a chapter, not in the older editions on the theories of solution and the conditions of chemical equilibrium," yet the entire matter has been conscientiously revised by the author and brought up to date Professor Long's large experience as a teacher of chemistry has enabled him to present the modern theories of solution, mass, action, etc., in a simple, direct manner, free from technicalities, which will appeal to students in medical schools Throughout the book the author's effort is apparent to present to the student the fundamental facts of chemistry in a simple yet exact manner, and in this he is eminently successful In our opinion, it is to be regretted that more attention is not given to chemical phenomena of direct interest to physicians, thus, although eight pages are devoted to the occurrence, history and metallurgy of iron, to the blast furnace and the nature of cast iron, wrought iron and steel, only four pages are given to the compounds of iron, their properties and behavior Similarly, it seems that when considering mercury the theories and conditions of variation in combining power, oxidation and reduction could with profit have been taken up In other words, would it not be desirable in a book for physicians to illustrate the principles of chemistry by examples of direct application to medicine rather than to base them on the metallurgy and processes of manufacture, which do not interest the student in medicine?

The Morphology of Normal and Pathologic Blood By G A. Buckmaster D M University College London, formerly Radcliffe Fellow, Magdalen College Oxford Cloth Pp 244 Price $3 00 Philadelphia P Blakiston s Son & Co 1906

This volume contains the substance of a course of lectures delivered by the author in the Physiologic Institute of the University of London Besides discussing the subjects embraced in the title of the work, Buckmaster also discusses the action of hemolysins, oxygen capacity, various chemical tests of blood, the biologic differentiation of bloods by means of precipitin tests, and a variety of other subjects ordinarily not classed under the term morphology The author gives the result of his investigations into the question of polycythemia at high altitudes In discussing the clinical pathology of the blood he protests against the excessive importance which is often attached to counts of red blood corpuscles to the neglect of the more instructive methods of investigation The book is to be commended.

State Boards of Registration

COMING EXAMINATIONS

New Jersey State Board of Medical Examiners, Trenton, October 16-17 Secretary, J W Bennett, Long Branch

Texas State Board of Medical Examiners, Houston October 16-18 Secretary, T T Jackson San Antonio

Florida Board of Medical Examiners (Regular) Jacksonville October 17-18 Secretary J D Fernandez, Jacksonville.

Illinois State Board of Health, Great Northern Hotel Chicago, October 17 19 Secretary, J A. Egan Springfield.

Louisiana State Board of Medical Examiners New Orleans, October 19-20 Secretary, F A. Larue New Orleans.

Kentucky State Board of Health, Louisville October 23 Secretary J N McCormack Bowling Green

Indiana Board of Medical Registration and Examination Indianapolis, October 23 25 Secretary, W T Gott Indianapolis.

Nevada State Board of Medical Examiners, Carson City, November 5 Secretary, S L. Lee, Carson City

Nebraska State Board of Health State House Lincoln November 7-8 Secretary Geo H Brash, Beatrice

Maine Board of Registration in Medicine Portland November 18 Secretary Wm J Maybury Saco

Connecticut Medical Examining Board City Hall New Haven November 13-14 Secretary Charles A. Tuttle, New Haven

Massachusetts Board of Registration in Medicine State House Boston, November 13 14 Secretary Edwin B Harvey State House

West Virginia State Board of Health The Frederick, Huntington, November 13 15 Secretary H A Barbee Point Pleasant.

Missouri State Board of Health Kansas City November 26-28 Secretary, J A. B Adcock, Warrensburg

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Massachusetts July Report—Dr E. B Harvey, secretary of the Board of Medical Registration in Medicine reports the written examination, held at Boston, July 10 11, 1906 The number of subjects examined in was 11, total number of questions asked, 60, percentage required to pass, 70 The total numer of candidates examined was 153, of whom 117 passed, including 9 non graduates, and 36 failed, including 20 non graduates The following colleges were represented

PASSED

College.	Year Grad.	Per Cent.
Yale University	(1905)	70 1 73 8, 88 3
Medical School of Maine	(1883),* (1902)	70
College of P and S Baltimore	(1906)	77 1 78 5
University of Maryland	(1906)	83 1
Johns Hopkins Med School	(1902) (1906)	77 8, 82 3
Maryland Med. Coll.	(1905)	70 74 3
Baltimore Med Coll.	(1901) (1904) (1906),	72 75 8 70 5 72, 72 6 73 8, 73 8 74 3
Harvard Med School	(1904) (1905) (1906)	72 3 72 5, 84 9 70 6, 71 1, 72.1 73 3 73 3 73 8 75, 75 8 76 3 76 5 76 6 77 78 1 78 6 78 8 81 1 81 1 81 5 81 6 81 6 82 82 1 88
Tufts Coll Med. School	(1906)	70, 70 3, 70 8 71, 71 1 71 6, 72 72.1 72.3, 72.3, 72 5 72 6 72.6 72.8 73 73 73 1 73 3 74 3 75 75 1 75 1, 75 5 75 8 76 3, 76 3 76 5 77, 77 8 78 3, 78 5 79 8 80, 80 5 81 82.6
Boston University,	(1904) (1905) (1906)	70 74 1, 70 70 1, 70 1 71, 71 8 72.6
University of Michigan	(1895) (1905) (1906)	77 8, 75 5, 70 5, 83 1
Long Island Coll Hospital	(1906)	71 6
Dartmouth Med. Coll	(1906)	74 8 75
University of Pennsylvania	(1900)	70 6 75 3
Woman s Med. Coll of Pennsylvania	(1906)	73 5, 80 8
Jefferson Med. Coll	(1906)	74
Hahnemann Med. Coll Philadelphia	(1905) (1906)	72.8 70 8
University of Vermont	(1906)	72 3 75 8 76
Syrian Protestant College, Beirut	(1891)	71

FAILED

College.	Year Grad.	Per Cent.
College of P and S Baltimore	(1905)	57 6
Baltimore University	(1903) (1906)	43, 63 8
Baltimore Med. Coll	(1906)	63 1 66 1, 66 0
Maryland Med Coll	(1906)	50 5
Boston University	(1906)	65 65 1 65 3
University Med Coll Kansas City	(1899)	58 5
Eclectic Med Coll New York	(1906)	55
University of the South	(1906)	66 8
Laval University Quebec	(1905)	63
Harvard Med. School	(1906)	65 3
University of Naples	(1904)	63 4

* No percentage given

Oregon May and July Reports—Dr Bryan E Miller, secretary of the Board of Medical Examiners of Oregon, reports the written examinations, held at Portland, May 10 12 and July 11 13, 1906 The number of subjects examined in was 15, total number of questions asked, 100, percentage required to pass, 75

At the May examination the total number of candidates examined was 44, of whom 19 passed and 25 failed, including one non graduate The following colleges were represented

PASSED

College	Year Grad.	Per Cent.
University of Southern California	(1900)	79 4
Rush Med Coll	(1891)	81 8
University of Iowa	(1892)	76 6
University of Iowa Homeo Dept	(1890)	76 7
University of Michigan	(1884)	76 6
University of Minnesota	(1899)	82.6
University of Oregon,	(1906)	77 77 3, 78 5 78 7 80 1 80 6 81 2 82 7 82 8, 83 6
Willamette University	(1906)	80 8
University of Virginia	(1902)	78 5
Trinity Med. Coll, Toronto	(1906)	78 8

FAILED

College	Year Grad.	Per Cent.
Denver and Gross Med. Coll	(1888) (1904)	74 6 72 4
Northwestern Univ	(1905)	72 2
Southern Homeo Med Coll	(1897)	67 9
St. Louis University (Marion Sims Beaumont Med Coll)	(1904)	72.
Ensworth Central Med Coll	(1900)	68 7
Lincoln Med Coll	(1903)	73 4
Eclectic Med. Inst. Cincinnati	(1902)	74 9
Willamette University	(1906)	59 6 61 9 64 2 69 4 69 7, 70 71 7, 72 1 72.6 73 2.
University of Oregon	(1906)	66 8 69 6 73 9 74 8
University of Vermont	(1905)	57 6
Laval University Montreal	(1904)	67 8

At the July examination the total number of candidates examined was 44, of whom 21 passed and 23 failed The following colleges were represented

PASSED

College	Year Grad.	Per Cent.
Cooper Med. Coll	(1906)	80.3 87 9
Denver and Gross Med Coll	(1904)	76 9
Hahnemann Med Coll Chcago	(1899)	80 0
Hering Med. Coll Chicago	(1896)	75
Rush Med. Coll	(1903) (1904)	92.7 81 9
Northwestern Univ Med. School	(1904) (1906)	82 6 84 8
College of P and S., Chicago	(1900)	81 8 82 4
Tulane University	(1906)	82
Johns Hopkins Med. School	(1906)	91 7
Harvard Med School	(1906)	80 6
Eclectic Med Inst., Cincinnati	(1902)	83 1
Willamette University	(1906)	75
University of Oregon	(1905)	82.3
Jefferson Med. Coll	(1905) (1906)	78 9 90 2
University of Toronto	(1904)	84
University of Munich Germany	(1903)	[illegible]

FAILED

Denver Homeo Med Coll		(1906)	68
American Med. Miss. Coll		(1899)	69 4
Bennett Coll Eclec. Med and Surg Chicago		(1906)	68 1
Rush Med. Coll		(1903)	70
College of P and S, Chicago	(1902) 69 7	(1904)	59
Tulane University		(1893)	72 8
Southern Homeo Med. Coll		(1897)	73
University of Michigan		(1872)	71 4
University of Michigan Homeo Dept.		(1890)	72
Detroit Coll of Med		(1896)	66
Washington University		(1887)	65 8
Barnes Med. Coll		(1903)	73 7
Medico-Chirurgical College, Kansas City		(1905)	73 1
Willamette University	(1906) 60 1 64 8 67 2,		68 6
University of Oregon	(1906) 65 9 71 8,		72 0
Unversity of Vermont		(1905)	60 4
Laval University, Montreal		(1904)	63 9

Wisconsin July Report.—Dr J V Stevens, Secretary of the Wisconsin State Board of Medical Examiners, reports the written examination held at Madison, July 10 12, 1906 The number of subjects examined in was 15, total number of questions asked, 140, percentage required to pass, 75 The total number of candidates examined was 37, of whom 33 passed, 2 failed, and 2 were conditioned Forty reciprocal licenses were granted, including 2 Osteopaths The following colleges were represented

PASSED

College.	Year Grad.	Number Examined
Rush Med. Coll	(1906)	3
College of P & S Chicago	(1906)	3
American Med. Miss Coll	(1905)	1
Northwestern Univ Med. School	(1906)	1
Illinois Med Coll	(1906)	1
Johns Hopkins Med. School	(1906)	2
Milwaukee Med. Coll.	(1906)	10
Wisconsin Coll of P & S	(1906)	10
University of Toronto	(1906)	1
Western University Canada	(1906)	1

FAILED

Northwestern Univ Med School	(1895)	1
Wisconsin Coll. of P & S	(1906)	1

REGISTERED THROUGH RECIPROCITY

	Year Grad.	Reciprocity with
Northwestern U M. S	(1902) (1904) (1905 2) (1906)	Illinois
Rush Med. Coll	(1887) (1902) (1903) (1904 3)	Illinois
Coll of P & S Chicago	(1903) (1905 2) (1906 4)	Illinois
Illinois Med. Coll	(1906)	Illinois
Hahnemann Med. Coll Chicago	(1906)	Illinois
Bennett Coll. of Eclec. Med & Surg.	(1896)	Iowa
Keokuk Med. Coll.*		Iowa
Keokuk Med Coll.	(——)*	Iowa
Louisville Med. Coll	(1887)	Iowa
Baltimore Med. Coll.	(1905)	Iowa
College of P and S., Baltimore	(1900)	Minnesota
Detroit Coll. of Med	(1906)	Michigan
Michigan Homeo Med. Coll	(1906)	Michigan
University of Minnesota	(1905)	Minnesota
University of Minnesota	(1897)	Illinois
Missouri Med. Coll	(1897)	Illinois
St. Louis Univ (Marion Sims Beaumont Coll)	(1906)	Illinois
Western Reserve University	(1905)	Ohio
University of Vermont	(1890)	Illinois
Queen s University Canada	(1895)	Illinois

*Year of graduation not given

The following questions were asked

PRINCIPLES AND PRACTICE.

1 In a comprehensive way give the causes of disease in man. 2. Give differential diagnosis and treatment of ulcer of the stomach. 3 Give etiology and treatment of sciatica. 4 Give differential diagnosis of rubeola, rotheln, scarlatina, varicella, variola. 5 What is autointoxication? Give source of the toxins causing disease in man. 6 Define all the valvular lesions of the heart and give etiology prognosis and differential diagnosis 7 Give diagnosis prognosis and symptoms of acute uremia. 8 What is ascites? Give etiology in full 9 What effect has urea on the human organism? 10 Give differential diagnosis between appendicitis and cholocystitis

OBSTETRICS

1 Describe the physiology of ovulation and menstruation. 2. Give the anatomy of the uterus and its appendages, including nerves and blood vessels 3 What are the conjugate and transverse diameters of the superior and inferior straits of the pelvis? Give anatomic points of measurement. 4 In a case of firmly contracted uterus and persistent hemorrhage, what would you suspect and what would you do? 5 Give five conditions in labor any one of which would warrant instrumental interference and give technic of use of forceps 6. Give clinical history method of prevention and treatment of puerperal eclampsia. 7 Give causes diagnosis, prognosis and treatment of puerperal phlebitis. 8. How would you manage a case of prolapsed funis? How one of short funis? 9 What means would you employ to resuscitate a still-born child? 10 Name three oxytocic agents and give indications for their use.

ANATOMY

1 Give the origin, insertion and function of the gastrocnemius sternocleidomastoid and biceps muscles. 2. Describe the femoral vein and sciatic nerve. 3. Describe the femur 4 Describe the brachial plexus 5 Describe the inguinal canal Poupart's ligament and name the principal coverings of inguinal hernia 6 What is the abdomen? Name its contents 7 Name and give a brief description of the membranes of the brain 8 Describe the heart, and name the important vessels leading into it. 9 Describe the brachial radial and ulnar arteries 10 Name the bones entering into the formation of the ankle joint.

MATERIA MEDICA AND THERAPEUTICS

1 Describe the actions of potassium iodid giving in full its actions a In small doses b in large doses c. its manner of elimination d. its therapeutic uses. 2 Describe the physiologic actions the active principle and therapeutic uses of *Glandula suprarenales siccæ* U S P 3 What accidents are liable to occur during the administration of ether as an anesthetic? Describe in full how they are to be avoided 4 What are the following substances and of what strength should they be in order to be up to the standard of U S. P., pepsin pancreatine? 5 On what principles do medicines act as diuretics? Describe physiologically how this is done, giving an illustration in each case 6 What is plumbism and how is it brought about? 7 Name eight drugs which act as anthelmintics 8 Give therapeutics of hypodermoclysis 9 Give source composition and therapeutics of the following antitoxins as they are now known Antidiphtheric serum tetanus antitoxin antitoxin of bubonic plague antistreptococcus antipneumococcus antituberculosis and anti anthrax serum 10 Give treatment of poisoning by carbolic acid.

DIETETICS

1 Define dieting 2 Classify components of organic food. 3 Give comparative value in calories of protein starch or sugar and fat. 4 Prescribe a course of diet in a case of typhoid fever (adult) during period of fever and also during convalescence 5 Prescribe a course of diet in a case of diabetes mellitus

HYGIENE.

1 What is meant by the term disinfection? Name five disinfectants and give in detail the manner of using them. What is a deodorant? 2 Give the source of the contagion of typhoid fever How may it be conveyed and how may the disease be prevented from spreading? 3 Give practical method of ventilating an ordinary unventilated room At what temperature should it be kept in a case of pneumonia, diphtheria scarlatina measles or smallpox? 4 What is best general method of purifying drinking water? 5 How long after recovery would you keep under quarantine a case of diphtheria scarlet fever or smallpox?

PATHOLOGY

1 Define inflammation and explain the phenomena of inflammation in the order of their occurrence 2. Give the etiology of acute endocarditis and describe the pathologic changes in structure throughout its course limiting your description to a mitral valve 3 Discuss the causes and structural changes in arteriosclerosis 4 Trace in the order of their occurrence the gross and microscopic changes that take place in a lung affected with lobar pneumonia 5 Name the degenerative or retrogressive processes and describe one of them. 6 Briefly outline Ehrlich s side-chain theory of immunity and explain the action of diphtheria antitoxin. 7 (a) Give the kinds of infarcts, where they are found and causes of their formation (b) Give the pathologic changes which take place in a Peyer s patch throughout the course of typhoid fever 8 Describe a small contracted kidney giving the gross and microscopic appearance 9 Make a drawing of a miliary tubercle in the lung and show condition of surrounding lung tissue 10 Classify the animal parasites causing disease in man and describe the pathologic condition caused by any one of them

CHEMISTRY

1 Name the halogens and describe one of the group 2. Define the following terms and give an example of each (a) Water of crystalization (b) binary compound, (c) double salt, (d) double decomposition. 3. Express by equations the chemical reactions when the following substances are combined (a) Barium dioxid and sulphuric acid, (b) slaked lime and sal ammoniac, (c) lead acetate and sulphuretted hydrogen, (d) Manganese dioxid sodium chlorid and sulphuric acid. 4 Give the formulæ for three insoluble carbonates and three insoluble chlorids. 5 Discuss the element mercury 6 Describe in detail three reliable tests for albumin in urine other than the heat test. 7 Give the chemical test for free HCl in gastric contents and write equation to show reaction. 8 Describe the diazo reaction and give its diagnostic value 9 Give two reliable tests for sugar in urine and write equations for reactions in each case 10 Write the formulæ for chloroform wood alcohol and marsh gas and describe any one of them

MEDICAL JURISPRUDENCE

1 Differentiate between lunacy and idiocy 2. What is the difference between civil and criminal malpractice? 3 How could you positively decide that an infant had died since birth instead of being a still born child"? 4 What rights does a physician have in refusing to testify as a medical or surgical expert unless he is allowed fees as an expert? 5 Define infanticide and state whether it is ever justifiable and if so what steps would you take to protect yourself in such a case

TOXICOLOGY

1 Name five vegetable poisons and an antidote for one of them 2. Give treatment for poisoning by swallowing mercuric chlorid 3 How would you detect arsenical poisoning? Give treatment for a case 4 How would you diagnose and treat a case of poisoning by phosphorus? 5 What is carbolic acid (chemically speaking)? Name an antidote for it.

SURGERY

1 Differentiate asepsis and antisepsis, and illustrate their principle in applied surgery 2 Differentiate the uses of chloroform and ether anesthesia and give contraindications in the use of each 3 Define a Pott s fracture and a Colles fracture and give treatment for each 4 Describe the different dislocations of the shoulder joint, and give the methods of reduction 3 Give history and treatment of osteomyelitis, acute and chronic. 6 Diagnose and give treatment for strangulated hernia and describe some one oper

ation for the radical cure of inguinal hernia. 7 Give varieties and treatment of fistula in ano and give the radical treatment of hemorrhoids 8 Give history and treatment of acute appendicitis and acute cholecystitis 9 Give the cardinal principles in use in making amputations of the extremities, and describe a Choparts amputation 10 Give the cardinal principles in use in the treatment of fractures, and describe (the) treatment for a fracture of the patella

GYNECOLOGY

1 Give diagnosis and treatment of extrauterine pregnancy 2 Give varieties and treatment of tumors of the uterus and differentiate malignant from non malignant 3 Diagnose salpingitis and pyosalpinx and give treatment in each 4 Give varieties and treatment of tumors of the ovary 5 Give varieties and treatments of malpositions of the uterus and name the important operations used describing any one of them 6. Give diagnosis and treatment of metritis and endometritis 7 Define urethral caruncle and vesicovaginal fistula and give the treatment for each. 8. Describe operations of choice in a given case of lacerated cervix uteri and of ruptured perineum 9 Describe treatments of choice in given cases of vaginitis urethritis vulvitis and pruritis 10 Give the most common causes and results of acute pelvic inflammation with treatment.

PHYSIOLOGY

1 Locate and describe and give functions of glomerulus of the kidney 2 How is the normal temperature of the body maintained? 3 What are the chief differences of function between the cerebrospinal and sympathetic nervous systems? 4 Describe and give functions of the spleen and pancreas 5 What are the changes in bread during its digestion, and where does each occur? 6 How many kinds of muscular tissues are found in the body? Describe each 7 Give the physiology of vision 8 Give the origin function and the relative number of the different kinds of blood corpuscles in the healthy body 9 What are the functions of the vagus nerve? 10 Describe the chemical interchange between blood and air during respiration and mention the forces concerned in this interchange.

URINALYSIS

1 Give test for chlorids 2 Give test for sugar (a) albumin (b) uric acid 3 Of what significance is the urea found in urine? 4 Give direction for collection of urine examination (a) When should specimens be voided to give best results? (b) Outline your method of procedure in examining suspected urine 5 Give test for blood in urine. 6 Give constituents of normal urine (a) How are they determined? 7 What are the tests for urinary calculi? (a) Give composition of urinary calculi. 8 How do you take specific gravity? What is the significance of abnormal deviation in specific gravity of urine? 9 How would you detect bile in urine? 10 What is mucin? How detected?

BACTERIOLOGY

1 What is phagocytosis? What is diphtheritic antitoxin? 2 Describe the mosquito theory of the spread of yellow fever 3 Give the bacteriology of chronic phthisis and describe reversion of type 4 Describe a method of making a plate culture and a stab culture. 5 Describe the Klebs-Loeffler bacillus What is Koch s postulate?

HISTOLOGY

1 Name the leucocytes and describe each. 2. Diagram a typical mucous membrane and name the structures composing it. 3 Name the varieties of epithelium and describe each 4 Describe a Peyers patch and state where found 5 Draw diagram of a lobule of the liver, and describe it.

PHYSICAL DIAGNOSIS

1 Differentiate between diphtheria and follicular tonsillitis (a) Scarlet fever and measles 2 Diagnose a typical case of acute enterocolitis. 3 What are the symptoms of lobar pneumonia? (a) Pleurisy with effusion? 4 What are the various methods used in making a physical diagnosis? (a) Give a plan or system by which you may be reasonably sure of arriving at a correct diagnosis. 5 Differentiate between neuritis and neuralgia 6 Give signs of suppurative appendicitis. (a) Recurring appendicitis 7 Give the differential diagnosis of smallpox and chickenpox. 8 Give the differential diagnosis of eczema acne and urticaria

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Travel Notes

DISEASES AND HOSPITALS OF AFRICA

NICHOLAS SENN, M D
Professor of Surgery in the University of Chicago Professor and Head of the Surgical Department, Rush Medical College.
CHICAGO

(*Concluded from page 1099*)

THE HOSPITALS OF PRETORIA AND CAPE TOWN

The road from Cape Town to Vynberg, over which the tramway passes, is lined on both sides with veteran oak trees, which the Dutch imported and planted more than a century ago They are not the tall smooth stemmed proud oaks of our forests but low, knotty, many branched trees, which have managed to live and to attain extreme old age, on this to them foreign soil, but would look strange and unfamiliar to their kin in their native land On this road, 15 minutes from Rondebosch station, is the famous "Groot Schuur," (Great Barn), one of the many African residences of the late Cecil Rhodes The palatial house built in Dutch style is in the midst of a magnificent flower garden in an open place surrounded by a dense forest of indigenous and planted trees The location is an admirable one for a restful retreat and which the great statesman and financier must have enjoyed when he took the time to leave his work and take a rest. The house is now occupied by Premier Jameson, of Jameson Raid notoriety—a strange piece of history

The present population of Cape Town is about 100 000, including the natives The natives here resemble in every respect the colored people of our northern cities and are engaged in similar employments

SOMERSET HOSPITAL.

This is the only hospital in Cape Town A large, centrally located dispensary takes care of the bulk of the sick poor who do not require hospital treatment, thus relieving the congestion in the out door department of the hospital The hospital was built forty five years ago and has undergone many material alterations since that time and has been enlarged, with the increasing number of patients seeking admission It is beautifully located near Green Point and the docks of the Union Castle Steamship Company facing the spacious harbor The front of the building is stone and cement, its many windows, wide entrance two corner towers and the ornamental grounds in front of it give it the appearance of a royal mansion, rather than that of a home for the sick.

The interior of the hospital leaves much to be desired to meet the requirements of such an institution in these days of hospital perfection and it is strange that such an old city with its many citizens of wealth should not have arranged before this for the necessary changes which are urgently needed A staff of eight doctors, four surgeons and four physicians, each of them with a long string of capitals behind their names, a resident surgeon and three resident medical officers are in charge of the sick and injured. The only specialists are an opthalmologist and a dental surgeon In none of the African hospitals I have visited have I found a gynecologist, although pelvic surgery forms an important item in the hospital reports Pelvic surgery is included, as it should be, in general surgery, and constitutes a part of the legitimate work of the attending surgical staff

The Victoria Nurses' Home, in the same grounds, is nearing completion at a cost of about $33 000 It is a handsome two story brick building and when ready for occupancy will meet one of the urgent needs of the hospital The nursing is in charge of nine ward sisters, one night superintendent, one operating theatre superintendent, and 36 probationers The report of the hospital for 1905 shows that *amour* does not disdain to enter here, as elsewhere, the sanctity of a hospital, as during the year two ward sisters and four nurses resigned from the nursing staff to be married Of 116 applicants to enter the training school, only 22 were accepted and many of the probationers left during the first three months, owing to unsuitability

The hospital has space for 101 beds, including the two wards for natives At the time of my visit only the children s ward was full In the other wards half of the beds were not occupied As in South Africa it is during the summer months that the hospital has the largest number of patients As the institution takes care of all sailors who require hospital treatment its inmates represent many nationalities and languages The total number of patients treated during the year was 1077 1 190 were Europeans and 636 colored Of this number 170 died 87 Europeans and 83 colored The last two figures attract attention when we consider the small number of blacks who are in the hospital, as compared with the whites

The average daily cost per in patient was $1 55 The total maintenance expenses amounted to over $100 000 Toward meeting the running expenses of the hospital the government grant of $55 000 furnishes the bulk the income from paying patients is a little over $10 000 and the balance of the expenses is made up by subscriptions donations and collections Among the donations one appears in the list like this U S America Government appropriation as contributed to hospital per Horace Lee Washington, American consul general, pounds 10, 2s , 8d '

This hospital appears to have more grateful, appreciative patients than others, as in the list of donations marked, "Grateful patient," one contributed $50 00, another $2 50, one $5 25, and a third one $10 00

The clinical material of the hospital is not of special interest to the surgeon, as it is almost identical with that of any hospital in the eastern, western and middle states In the children's ward, I saw a child, three years old, recently operated on successfully by the bloodless method for double congenital dislocation of the hip joint. I was told that it was the first operation of the kind in Africa. In the same ward was a little girl who had been repeatedly operated on for exstrophy of the bladder The first operation of Maydl's method—implantation of the trigone of the bladder into the large intestine—failed. Subsequent plastic operations finally succeeded in procuring a cover of skin flaps for the exposed and bulging posterior wall of the bladder Tuberculosis of the lungs is very frequent.

The report states "The number of cases of tuberculosis is remarkable The cases we get are generally far advanced and the ravages of this terrible disease, especially among the colored people, are truly appalling" Many of the negroes afflicted with the disease die in three months from diffuse miliary tuberculosis The mortality of tuberculosis in Cape Town is increased by patients coming from Europe, too late to be benefited by change of climate and who are too sick to return to their homes with any hope of reaching their destination alive.

The beds of typhoid patients in the general ward have a white instead of a blue bedspread to distinguish them from the other patients, which at once reminds the visitors and nurses of the nature of the disease of their occupants In the ward for colored women, I examined a patient who was suffering intensely from advanced carcinoma of the pyloric end of the stomach The woman was a half caste about 40 years of age. I must repeat here in completing my account of hospitals and diseases of Africa that what I have emphasized a number of times has been confirmed by subsequent observations, viz. 1 The pure-blooded negro is almost, if not entirely, immune to carcinoma and inflammatory diseases of the appendix. 2 In consequence of adoption of civilized habits and change of food and especially by the admixture of the blood of the whites, he gradually loses this immunity and becomes subject to all the diseases of the whites, including carcinoma and appendicitis

The farther I got away from the real primitive negroes of the east coast of Africa, the more frequently I heard of the occurrence of these diseases among the negroes, who for fifty years and longer had been under the influence of civilization, and most of the patients were half castes

On board S S *Elderman* July 20

Medical Organization

THE CARROLL COUNTY (GA.) MEDICAL SOCIETY

J F Cole, M.D., Secretary

CARROLLTON, GA.

The Carroll County Medical Society has been in existence continuously since 1865 It is, of course, a member of the State Medical Association During the dark reconstruction days following the Civil War, the society struggled and held its own, its lines falling in more pleasant places as the times improved

To day we present almost a solid phalanx, every medical practitioner in Carroll County, with the exception of two non eligibles, being active members in good standing Never in the history of the society have the doctors of the county come so near being a unit We are all standing together, shoulder to shoulder, each doing his utmost to make smooth the rough places of his brother We are enthusiastic, we are in earnest There is no county society in the whole country which has less of backbiting, strife and unprofessional hammer and tongs Each member tries to upbuild and to uphold our glorious profession, to follow the Golden Rule, to pattern after the Great Physician.

The meetings of the society are held at 10 a m on the third Tuesday in each month, in the office of the secretary After the routine work cases of interest are reported and discussed and clinics are held, which are both instructive and interesting After one hour's adjournment for dinner, business is again resumed and then follows the reading and discussion of scientific papers On file in the archives of the society will be found many masterly and highly instructive papers

At our October (1906) meeting we will have a banquet at which will be present some of the most eminent practicians in the state We anticipate a glorious time

On the question of fees for life insurance examinations we are an absolute unit Every member has signed the schedule of fees, viz., $5 for examination with urinalysis, or $3 without urinalysis, $10 where microscopic examination is required. Those insurance companies who refuse to pay our fees are not selling any insurance in the county, but those paying fees are getting the business, for every doctor in the county who is an examiner naturally throws his influence to those companies who comply and against those who do not More than that, we will not accept a reduced fee from the company and the rest of the $5 from the agent We took that action in order to bring the matter to a focus Certain companies have attempted to bring neighboring physicians into the county to do the examining, at the reduced fees, but the companies were informed that the plan would not work. We are standing for our rights, and we determine what our professional services are worth. Those insurance companies which do not pay a $5 fee might just as well move out of the county, their business here will be slim

We are flourishing as the green bay tree Each stands for his profession and for rights We are proud of our society

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Missouri.

Scott County Medical Association—A medical association has been organized at Benton with the following officers Dr Theodore F Frazer, Commerce, president, Dr Richard A. Sparks, Blodgett, vice-president, Dr Uriel P Haw, Benton, secretary, Dr Pleasant W Malcolm, Sikeston, treasurer, and Drs William H. Westcoat, Oran, Garnett S Cannon, Fornfelt, and Henry Rodenmeyer, Kelso, censors

Kansas.

Coffey County Medical Society—With the assistance of Dr J E Sawtell, Kansas City, councilor for the seventh district, a county medical society was organized at Burlington on the standard plan with the following officers Dr John C. Fear, Waverly, president, Dr Harry T Salisbury, Burlington, vice president, Dr Drury B Rowe, Le Roy, secretary, Dr William H. Mathias, Waverly, treasurer, and Drs Alexander K. Berry, Granville R. Norris and Verbinia McMullen, all of Burlington, censors

Kentucky

Adams County Medical Association—The physicians of Adams County have organized a medical association with Dr R Y Hindman, Columbia, president, and Dr Uriah L. Taylor, Columbia, secretary

Crittenden County—The physicians of Crittenden County met at Marion and reorganized the Crittenden County Medical Society, with the following officers Dr J Ernest Fox, Levias, president, Dr William T Daughtrey, Marion, secretary

Maryland.

Queen Anne County Medical Association—The Queen Anne County Medical Association has been organized with the following officers President, Dr James M C Corkran, Centerville, vice president, Dr Wilmer Adams, Wye Mills, Talbot County, secretary, Dr Howard R Hopkins, Queenstown, and delegate to the Medical and Chirurgical Faculty, Dr John H W G Weedon, Church Hill

Michigan.

Kent County Medical Society—This society, which was recently organized, has adopted the constitution and by laws recommended by the American Medical Association for county societies

Minnesota

Dakota County Medical Association—Through the efforts of Dr E Franklin A Dodge, La Sueur, councilor for the seventh district, and Dr Thomas S McDavitt, St Paul, secretary of the state medical society, the Dakota County Medical Society was reorganized at Hastings, with the following officers Dr Julius C Fitch president, Dr Thomas A. Caldwell, vice president, Dr H H Hazeltine, secretary, Dr Henry G C Van Beeck, treasurer, and Drs Alexander C Dockstader Alfred M Adsit and Llewellyn D Peck, censors, all of Hastings

Society Proceedings

COMING MEETINGS

American Association of Railway Surgeons Chicago, Oct 17 19
Mississippi Valley Medical Association, Hot Springs, Ark Nov 7 8
Southern Surg and Gyn Assn Baltimore, Dec. 11 13
American Public Health Assn Mexico City, Dec. 3 7

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS

Nineteenth Annual Meeting, held at Cincinnati, Sept 20 22, 1906

(Continued from page 1128)

Intestinal Obstruction Due to Gallstones

Dr. **Miles F Porter**, Fort Wayne, Ind , said that gallstones may obstruct the bowel in five different ways, obturation being the most usual form, and is more common in females past middle life The stone may get into the bowel through the common duct but usually enters from the gall bladder by obturation, via the duodenum, and may lodge anywhere from the pylorus to the anus, but in the majority of cases it is found in the ileum As a rule, the gut is not damaged, but gangrene and perforation occur if the obstruction is not relieved promptly The symptoms are those of acute, but often not complete obstruction of the bowel A previous history of gallstone disease is found in most cases A migrating tumor originating in the gall bladder, or a stationary tumor of egg size and shape, and hard, are of great diagnostic value, but are absent in most cases Tenderness and rigidity are not present until late Shock is not marked Multiple attacks of bowel obstruction are significant of gallstone ileus Exploratory incision is the best means of making the diagnosis in the majority of cases The mortality is 50 per cent This large mortality is due in no small measure to the advice given by many authors to delay operation until a fair trial of medical treatment, massage, etc., has failed. The mortality might be reduced to 5 per cent. by prompt surgical interference He reported two cases in women past 40, who had had previous gallstone trouble, the stone lodged in the ileum in both cases In one case a tumor near the gall bladder disappeared before obstruction came on. One woman, treated medically, died, the other recovered after enterostomy

Diagnosis and Treatment of Accidental Uterine Hemorrhage.

Dr. **Adam H Wright**, Toronto, said that the following procedures are conspicuous in this regard Rupture of the membranes, plugging the vagina, forcible delivery, and Cesarean section. The mortality rate of forcible delivery, when the patient is suffering from shock and the uterus is tetanically contracted, is, in his opinion, 100 per cent A certain amount of force might, however, be used under certain circumstances For instance, the obstetrician may have ruptured the membranes before the os was dilated, there might still be considerable hemorrhage, making an early emptying of the uterus advisable In such a case manual dilatation of the os with version or forceps delivery might be advisable. It is doubtful, however, whether such manual dilatation under such circumstances could be designated forcible delivery He has had no experience with vaginal or abdominal Cesarean section for accidental hemorrhage In the case of either concealed or combined internal and external accidental hemorrhage, with the patient suffering from shock and a cervix as hard as iron, any operation probably would be unjustifiable The shock should be treated, and if in spite of such treatment the symptoms of shock grow worse instead of better, the patient is probably going to die If, on the other hand, the patient recovers from the shock, it is certain that in some cases if not in the majority, serious operation is not advisable It might happen, however, that internal hemorrhage is taking place into a uterus whose walls are stretching rapidly, and the loss of blood is the chief factor If, in such an emergency, it is not possible to dilate the os and deliver soon enough to save life some form of Cesarean section might be deemed advisable

Diffuse Peritonitis.

Dr **John B Murphy** Chicago reported 36 cases of general suppurative peritonitis from perforation, with one death In treating this condition he emphasized the importance of relieving pressure and of instituting drainage, doing as little surgery as possible The patient should be put in a sitting position both before and after operation, so as to keep the infective material out of the diaphragmatic zone, and not the pelvic zone. At the time of operation the patient usually has all the infection he can carry, he is handicapped, and it is the duty of the surgeon to eliminate that infection or intoxication as much as possible, and in doing so care should be taken not to abrade any more surface so as not to admit more infective material The patient should be tided over for a few hours and his local resistance built up by washing out the blood with normal salt solution. Antistreptolytic serum should be employed and little or no food given.

Abuse of Purgatives

Dr **Edwin Walker**, Evansville, Ind , said that purgatives are used by the public and profession under widely adverse conditions This promiscuous use does much harm The best authors differ as to the physiologic action of purgatives There is a close resemblance between infections of the intestinal canal and the action of purgatives All of these considerations suggest care in the use of cathartics In constipation purgatives are contraindicated, in diarrhea they are limited in value Biliousness is too vague a term to be considered an indication for their use They should rarely be used in the preparation for surgical operation or the complications following Increased knowledge will no doubt materially curtail their use

Factors Which Have Lowered Operative Mortality and Have Improved Postoperative Results.

Dr **X. O Werder**, Pittsburg, Pa , attributed his better results both in regard to operative mortality as well as postoperative morbidity to (1) A more simple and better aseptic technic, including the wearing of rubber gloves, (2) better diagnosis and more careful preparation of the patient, especially the acute inflammatory cases, whose abdominal section is delayed at least three weeks after the subsidence of all acute symptoms, (3) the employment of a trained, absolutely reliable first assistant, (4) centralization of all operative work enabling the operator to give the greatest amount of personal attention to his patients, (5) the careful closure and covering of all raw surfaces in the peritoneal cavity, (6) the exclusive use of catgut prepared under personal supervision, (7) a trained anesthetist who administers a minimum amount

Management of Bowel of Doubtful Vitality in Operations for Relief of Strangulated Hernia and Intestinal Obstruction

Dr. **Rufus B Hall**, Cincinnati, said that these cases can be divided into three groups as soon as the operation has progressed to the stage where it can be inspected 1 Those cases where it is evident that a resection is not necessary 2 Those cases in which it is certain that a resection must be made 3 Those cases in which the surgeon is in doubt as to the vitality of the injured portion of bowel His method of treating this condition consists in employing a single layer of iodoform gauze, about three inches wide, placing it against one side of the mesentery and carrying it over the diseased bowel until it rests on the mesentery on the opposite side extending a couple of inches beyond the bowel of doubtful vitality on each side and placing this loop of bowel surrounded by the gauze just inside of the abdomen The wound is dressed, if it is intra abdominal by leaving one or two stitches untied, if it is a hernia operation, the end of the gauze surrounding the bowel is left projecting out of the wound a foot or more, so that there is no danger of loosening it inside The method is not applicable in all kinds of bowel injury, and is not advised except in certain definite conditions and surroundings

Utilization of Broad and Round Uterine Ligaments in Supravaginal Hysterectomy

Dr **Walter B Dorsett** St Louis pointed out that in impacted cases of myomatous uteri as well as in cases of large abdominal tumors of the uterus, a tendency to a shortening of the vagina follows the operation, and a sacculation of the bladder also is apt to ensue This is obviated by folding the remaining portions of the broad and round ligament on themselves and attaching them to the stump of the uterus in cases in which it is desirable to leave the ovaries, they are maintained in a better position and never become prolapsed

Symptoms and Treatment of Atresia Vaginæ

DR AUGUSTUS P CLARKE, Cambridge, Mass, said that inflammation occurring in the vaginal tract may become the exciting cause of atresia vaginæ Adhesions of the labia or other parts in the vicinity may interfere with normal parturition, if not prevent the menstrual flow In atresia hymenalis the obstruction usually is complete, and this gives rise to collections of blood or mucus high up in the vaginal introitus Such a condition can be relieved only by surgical measures The author has met with cases of atresia in which firm bands of cicatricial tissue had formed laterally between the middle and upper segments of the vaginal walls Traumatic cases can often be cured by resort to operative measures Congenital cases can not always be relieved satisfactorily In those cases in which the uterus and Fallopian tubes are in a mere rudimentary condition, surgical attempts for relief for the most part prove useless In two cases in which the cause was extensive laceration and sloughing of the parts, on account of traumatic lesions during parturition, subsequent pregnancy failed to take place In cases in which surgical measures have been resorted to, the employment of hard vaginal dilators and iodoform gauze is of much benefit

The author reported a case in which the vagina, at the time labor began, was so much contracted that an artificial opening, an extended incision, had to be made before the patient could be delivered The incision was made transversely, midway between the meatus urinarius and the anus and the lower portion of the sacrum Considerable depth of areolar tissue had to be broken down before the cervix was reached Delivery by the feet was then accomplished The condition was due to extensive sloughing of parts after a previous labor Bimanual examination, so far as it can be carried out, assisted by rectal investigation will be helpful in reaching a decision as to whether or not the uterus and adnexa are absent Their non-existence might be further strengthened by the absence of the vagina and clitoris Accumulations of blood high up, causing consequent pressure on the bladder and rectum, accompanied with symptoms of recurrent menstrual pains, is strong evidence that surgical measures should be resorted to In some of the cases in which atresia vaginæ supervenes after parturition, and in which extensive sloughing is also noticed, the mucous tissue is found to have undergone destructive changes at a number of different points throughout the vaginal canal Nearly all cases of the accidental or acquired class may be relieved by operative treatment. In congenital cases radical means for relief prove useless Such cases are due to the nondifferentiation of the original kidney duct into the Wolffian and the Muellerian duct The proper formation of the latter is absolutely essential to the development of the adnexa, the uterus and of the vagina

Preservation of the Vault of the Vagina in Pelvic Operations

DR. A VANDER VEER, Albany, N Y said that the life of a female can be divided into three periods—through puberty, through marriage and the birth of her first child and through the menopause At the period of puberty we must consider the functions of the ovaries and malpositions of the uterus At the time of the first confinement we must consider the possible lesions that might present, notwithstanding the most earnest care on the part of the obstetrician We must also consider the possible morbific changes that come at the time of the menopause In malignant growths the surgeon is in doubt in this region of the body as to how much normal tissue should be preserved Dr Vander Veer emphasized the axiom of practice to preserve normal tissues as much as possible, and under no circumstances to remove healthy organs

Vaginal hysterectomy requires separate consideration for each individual case In abdominal operations there is a difference in the nature of the procedure as between a malignant or non malignant condition Whatever method is adopted the one important object in view should be to bring the stump well up in position so that it will hold the vault and fornix of the vagina and prevent sagging The author has found that the old extraperitoneal method of hysterectomy preserves the vault of the vagina very well, there being less complaint of pressure of the cervix downward on the rectum, or against the tip of the coccyx In extensive operations the surgeon should not promise too much In considering recognized cases of malignancy, all organs within the pelvis should be removed as these conditions frequently occur at a time in life when all functions have ceased

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MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

Fifty sixth Annual Meeting held in Bedford Springs, Sept 10 13, 1906

(*Continued from page 1132*)

DR. DANIEL W JEFFERIS, Chester, in the oration on medicine discussed the passing of the general practitioner

Some Causes of Inefficiency in Medical Practice.

DR JOHN B ROBERTS, Philadelphia, considered this subject under the following headings 1, Lack of equipment for prompt service, 2, carelessness in observation, 3, indefiniteness in giving orders, 4, want of self-confidence and tact, 5 failure to appreciate the value of common remedies, and 6 insufficient doses of medicine

The Kidney in Scarlet Fever

DR B FRANKLIN ROYER, Philadelphia, studied the kidney condition of 300 patients treated by routine doses of chloral hydrate given during the febrile period and continued for several days after all fever subsided, paralleling this analysis with a similar group of 756 patients treated with the usual remedies used in this disease His study showed an incidence of 5 50 per cent postfebrile nephritis where chloral was used and 7 76 per cent where chloral was not used. He concludes that chloral hydrate is of distinct value in the treatment of scarlet fever, that it ameliorates nervous symptoms better than any remedy yet suggested in the treatment of scarlatina, that it allays the itching of the skin, that when given during the febrile period and for some days thereafter, postfebrile nephritis appears to be less frequent

Latent Diphtheria a Public-Health Problem.

DR M SOLIS COHEN, Philadelphia, said that the latent form of diphtheria in which the only symptoms are redness of the fauces, slight tonsillitis, nasal catarrh, an increased pulse frequency, an irritable heart, or a headache, is as dangerous to the public health as are the severe forms with definite membrane He recommended the taking of cultures from all throats presenting evidence of tonsillitis or which have been in contact with true diphtheria, and that all cases in which the Klebs Loeffler bacilli are found be placed under the control of the health authorities

DR. FRANK F SIMPSON, Pittsburg, reviewed the progress made in gynecology and referred to the new achievements therein

Surgical Treatment of Chronic Colitis

DR WILLIAM M BEACH, Pittsburg, cited as proper cases for appendicostomy, cases of amebic dysentery, colon adhesions, following catarrhal appendicitis, and gynecologic operations syphilis and primary tuberculosis of the colon, although the operation should not be done until less radical measures, such as diet and local treatment, have been exhausted. He described the technic of the operation and the after treatment, particularly the irrigation, the choice of solutions to depend on the conditions present

Perineal Prostatectomy, Its Accidents and Complications.

DR L J HAMMOND, Philadelphia, stated that the perineal route is the logical one, both anatomically and clinically, and cited as indications for the procedure 1, Imposible catheterization or nearly so, 2, permanent hypertrophy of the prostate with well defined tumor 3, residual urine in large amounts and rapidly decomposing, 4, frequent and painful micturition, 5 acute cystitis. The only contraindication is advanced pyelonephritis, associated with general arteriosclerosis The chief accidents which are liable to occur are Tear of the rectum, urethra or bladder wall, or hemorrhage or accidental injury to the prostatic plexus of veins, and recommended, in order to lessen the liability thereof, thorough distension of the sphincter The principal complications are shock, fistula (urethral, vesical, recto urethral and recto vesical), permanent incontinence, sepsis, uremia, pneumonia, cystic calculus

Dr William L Rodman, Philadelphia, stated that in the majority of cases the perineal route is better than the supra pubic route, but in cases in which the gland is very large, or in which there is enlargement of the middle lobe, and projection into the cavity of the bladder, the suprapubic is the method of choice In the perineal operation he prefers the method of Young, as it gives a better view of the field of operation, prevents injury to the ejaculatory ducts, and unnecessary traumatism to the urethra and neck of the bladder

Use of Silk in Tenoplasty, an Experimental Study

Dr George P Müller, Philadelphia, referred particularly to cases in which part of the tendon had been removed and replaced with a silk cord Out of the ten dogs operated on three are still living with no perceptible limp, five were killed at from two to five weeks, both limped perceptibly, in both the silk was surrounded by fibrous tissue In the other three new tendon tissue was forming

Causes of Failure in Tendon Grafting

Dr David Silver, Pittsburg, stated that failure is due to improper selection of cases, in which the greatest possible improvement has not been obtained by other measures, and occurs in cases in which the existent deformity has not been over corrected a sufficient length of time to allow the actual condition of the muscles to appear, and to errors in planning and executing the operation, such as inexact determination of the extent of the paralysis, improper distribution of the power, insufficient attachment of the implanted tendon, insufficient tension and improper technic leading to the formation of adhesions

Address in Surgery

Dr. Otto C Gaub, Pittsburg, referred particularly to the treatment of hemorrhage occurring in the scalp, thorax and abdomen, and reviewed the literature on the subject Hemorrhages of the scalp were considered under the designation of extradural and intradural, and those of the thorax as extra pulmonic and intrapulmonic.

Injuries of the Thoracic Cavity

Dr. George W Wagoner, Johnstown, divided the condition into injuries of the wall, or external injuries, which usually are not serious conditions, and injuries of the contents, or internal injuries, which are more grave He stated that the general principles of surgical cleanliness, the removal of destroyed tissue, drainage, disinfection and rest apply particularly to this class of cases He commented on the treatment of hemorrhage of the chest walls, of fractured ribs (in which case strips of adhesive plaster reaching halfway round the chest only should be used), surgical emphysema, dislocated cartilage, dislocation of the vertebral ends of the ribs, fractures of the sternum, shock, traumatic empyema, and injuries of the pericardium and heart

Abscess of the Lung

Dr William L Rodman, Philadelphia, stated that with the exception of the cases following influenza there is usually more than one pyogenic organism present, and that the abscesses may be either multiple or single The diagnosis should determine as to whether there are pleural adhesions present or not, but an exploratory operation should not be done unless it is to be followed immediately by a radical one In cases demanding a general anesthetic he prefers chloroform, which must, however, be given by an experienced operator

Empyema in Children.

Dr. John H Jopson, Philadelphia, reported a series of cases the ages of the patients varying from 10 months to 13 years 58 were males and 42 were females Prompt diagnosis and careful after treatment are essential factors

Treatment of Pleural Effusion

Dr Edward Martin, Philadelphia stated that streptococcic empyema offers a more favorable outlook than do the latent pleural effusions, the latter being tubercular in origin, with thickening of the parietal and pulmonary pleura Pleuritis is nearly always a secondary condition, frequently following pulmonitis or osteomyelitis Bacteriologic and cytologic examination of the effusion are valuable to determine its character He described in detail the operation for drainage of the cavity, which in the absence of contraindications should be made in the sixth interspace, in the midaxillary line, and if the effusion is purulent, continuous drainage is necessary

Roentgen Treatment of Tubercular Glands.

Dr. George C Johnston, Pittsburg, remarked on the frequency of tuberculosis following the removal of malignant growths, and urged the employment of the *x* rays as a post operative measure He cited as the advantages of this treatment over the surgical procedure, freedom from pain, non confinement to bed, no death rate, good cosmetic results and less liability of recurrence, while the disadvantages are that it is tedious, expensive and requires the services of an expert operator

Clinical Significance of the So-called Acute Stages of Bone Tuberculosis.

Dr. H. Augustus Wilson, Philadelphia, stated that bone tuberculosis is an essentially chronic, insidious process, and that the phenomena heretofore known as the acute stage are avoidable sequelæ The term acute stage is misleading and confusing in that it implies the beginning of a disease In reality the so called acute stage is intended to indicate the presence of more or less severe pain, swelling and temperature occurring during the progress of some cases of bone tuberculosis Such exacerbations have a pathologic basis in the pressure phenomena and toxemia produced by the accumulation of broken down detritus within the field of the osteitis The symptoms disappear as soon as the process of advance has opened up new territory and thereby released the previously existing pressure Recurrences take place in certain cases more or less frequently It is erroneous to call the condition acute stage, because it is not an essential part of the disease and never occurs in the beginning

(*To be continued*)

BRITISH MEDICAL ASSOCIATION

Seventy fourth Annual Meeting, held in Toronto, Ontario Aug 21 25, 1906

(*Continued from page 1130*)

SECTION ON OPHTHALMOLOGY

President's Address.

Mr R Marcus Gunn, F R C S, London, the president, in his introductory remarks recalled the loss that Canadian ophthalmology has sustained in the death of Dr Frank S Buller Montreal, whose work at Moorefields and Montreal is so well known and who recently in collaboration with Dr Casey Wood, of Chicago, brought to the notice of the profession the effects of poisoning by wood alcohol *in a memoir already classical* He welcomed heartily the visitors, especially those from the United States

Sympathetic Degeneration.

Mr Freeland Fergus, Glasgow, described twelve cases of a condition which he called sympathetic degeneration In many cases in which one eye has been severely damaged the other eye undergoes a degenerative process characterized by a concentric contraction of the field of vision in some cases extreme In most of the eyes thus affected there is a diminution of the visual acuteness and in a few there is severe neuralgia The condition is not accompanied by any obvious inflammation of the eye undergoing degeneration and has never yet led to blindness In the author's opinion when the field of vision, under such circumstances, becomes contracted it never recovers

Obstruction of the Central Retinal Vein

Dr Frederick H Verhoeff Boston reported six cases of obstruction of the central vein of the retina from which he drew the following deductions Complete obstruction of the central retinal vein with the classical ophthalmoscopic picture of thrombosis of this vessel may be produced by endophlebitis proliferans without thrombosis The proliferation may [illegible] the subendothelial tissue alone or the [illegible] pleted by a more active endothelial proliferation within the lumen All cases attributed to non septic thrombosis are in all probability due to endophlebitis alone The so called canalized thrombus of the central retinal vein is in the nature of a dis secting aneurism In certain cases obstruction of the vein may early give rise to acute glaucoma

Wood Alcohol Amblyopia.

Dr Casey Wood, Chicago, reported some recent cases of death and blindness from wood alcohol poisoning He stated that intoxication from the imbibition of methyl preparations is unknown in Great Britain It is comparatively more common in America because of the high excise duty on alcohol in the United States and Canada, by reason of which, deodorized or refined alcohol is extensively used in the arts and industries The characteristic ocular lesion is an optic neuritis with some papillary edema and distinct engorgement of the central vessels At the onset, this gives rise to primary blindness The acute papillitis soon subsides and vision improves, to be followed by a post neuritic atrophy and permanent loss of sight The most important form of poisoning is that from inhalation of the fumes in a confined space, observed among shellacers, whose varnish is made from the deodorized wood alcohol Within forty eight hours the patient complains of nausea, abdominal distress, weakness, headache, blindness and dyspnea, followed in fatal cases by convulsions, coma and death The treatment of the eye lesions is of little avail With the adoption of denatured, untaxed grain alcohol for commercial purposes by the United States, and its probable adoption by Canada, this form of poisoning will disappear In the meantime, more than 700 people have been killed or made blind by methylated preparations in these countries

Dr. Edward J Bernstein, Kalamazoo, reported a case of poisoning from inhalation of methyl alcohol in a watchman in a pharmaceutical laboratory He said it is customary with some manufacturers to use methyl alcohol to extract the active principles from the drugs, and questioned whether there is any danger of methyl alcohol poisoning in the use of such extractives

Sympathetic Ophthalmia.

Dr G Herbert Burnham, Toronto, opened the discussion on this subject with a consideration of the treatment of the sympathetically inflamed eye, and stated his belief that the routes traveled by the impulse are the optic and ciliary nerves The combined treatment of mercury and iodid of potassium internally and the hypodermatic injection of pilocarpin will control and practically cure sympathetic inflammation In cases of injury of the eye, the other eye may be rendered immune by the use of this treatment, which he advises should be employed at once. From the author's experience of sixteen years with this treatment, he feels justified in advocating the procedure

Mr. Arnold Lawson London, considered the preventive treatment of the disease. What is most needed is authoritative information on which a surgeon may base his decision on an attempt to save a dangerously wounded eye He suggested that great good would come from the investigation and report on the following five questions 1 Can it be definitely stated of any wound of the globe that it will inevitably produce sympathetic ophthalmitis in the other eye? 2 If not, what are the lines on which a surgeon should decide on immediate removal of the globe? 3 What are the considerations which may make him decide to attempt to save the eye? 4 In the later history of a case, short of definite evidence of commencing sympathetic ophthalmitis, what symptoms, if any, should make the surgeon decide on enucleation of the injured eye? 5 Are there any premonitory symptoms which may be accurately described as heralding the approach of sympathetic ophthalmitis, and on which a surgeon, by immediate enucleation of the injured eye, may prevent the onset of disease?

Dr. John W Sterling, Montreal, said that the pathology and etiology of sympathetic inflammation needed elucidation before the treatment of this disease can be anything but empirical Only when these positions have been made absolutely plain can any clear diagnosis and scientific treatment of the conditions be hoped for, and this will probably be on the lines of serum injection A bacillus has already been found, the inoculation of which into the vitreous and circulation of a rabbit, has set up a uveitis, resembling sympathetic ophthalmia

Dr. Frederick H Verhoeff, Boston, thinks that sympathetic disease, arising many years after injury, may be explained by recent infection of the scar by specific microörganisms

Dr. Samuel Theobald, Baltimore, believes in the neuropathic origin of the disease and that a vasomotor paralysis of the sympathetic eye precedes actual inflammation, as indicated by tortuosity and distension of the central retinal veins in disease commencing in the posterior pole, and by a similar condition of the subconjunctival veins when the disease commences in the anterior structures of the eye

Dr. John E Weeks, New York City, spoke of the conditions of the uveal tract in cases of sympathetic ophthalmia many years after the lesion, and mentioned one case which occurred forty five years after the injury to the exciting eye. In five such cases he had found a small celled infiltration of the uveal tract, usually most pronounced in the ciliary body He believed that evidence of threatened sympathetic inflammation is present, when the exciting eye, after having been quiescent for months or years, shows evidence of deep seated inflammation however mild this may be.

Accommodation After Middle Life.

Dr. Edward Jackson, Denver, in his paper entitled "Accommodation After Middle Life and Its Practical Importance," gave statistics based on observation of 559 patients more than 50 years of age The practical importance of this persistence of accommodation after middle life comes from the greater comfort and convenience of the patient, who is allowed to use what accommodation he has, and from the false deductions that may be made as to the presence and degree of ametropia, because of the failure to recognize the presence of such accommodation. Slight inaccuracies in the lenses of elderly patients who strain their diminishing power of accommodation to overcome them, may be more serious than higher degrees of hyperopia in young people who have plenty of accommodation.

Visual Tests for Public Services.

Dr Charles H. Williams Jr, Boston, in his paper entitled, "Necessity for Careful Examination of Vision and Color Sense," briefly summarized the work done by railroad companies in the United States, beginning with 188 , the Australian railway in 1904 and the Canadian Pacific railway in 1906 as regards the test for color vision and perception These roads used the Snellen or other test cards and the Holmgren worsteds and the lantern introduced by the author as an additional test for the color sense Standard tests for visual and color sense can be safely trusted to non professional men, instructed by and acting under the supervision of a competent ophthalmic surgeon. The examination of pilots and others at the Port of Boston under the United States Public Health and Marine-Hospital Service has followed the same methods for the last three years The author spoke especially of the necessity of requiring similar tests before licensing drivers of automobiles, which run on the highway at a rate of speed often equaling that of an ordinary passenger train He also referred to the recommendations of the committee on color vision of the Royal Society and of the House of Delegates of the American Medical Association in 1902 as showing the professional opinion regarding these examinations for visual and color sense.

Mr. Arnold Lawson, London, outlined the general requirements as regards tests for military service, and analyzed the present regulations in force and suggested improvements therein.

Dr. Edward Jackson, Denver, referred to the danger of relying on tests that are not reliable. There is a certain part of the spectrum that serves as a test for nearly all cases of red and green blindness, and the departure from this allows many cases to escape detection Test letters that can be known from larger letters on the card are readily learned and the candidate will often take great pains thus to evade the test

Mr. Freeland Fergus, Glasgow, believes that it is essential for a man who has duties as a pilot to perform to have a good light difference sense, as without this it would be impossible to make out land on a dark night

(To be continued)

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice Proper inquiries concerning general formulæ and outlines of treatment are answered in these columns]

Autumnal Catarrh

According to the *Practitioner* this condition may be looked on as a vasomotor neurosis, as the sufferers are of a neurotic constitution and from time to time suffer from spasmodic bronchial asthma In considering the treatment of the disease, the patient must be removed from the exciting cause of the paroxysm, and the conjunctival sacs and nostrils must be washed out with a bichlorid solution, 1 to 6,000

In some cases, according to the *Practitioner*, tamponing the nostrils with cotton wool soaked in glycerin is very efficient A careful examination of the nasal passages must be made to discover any abnormal condition, if present. Some authorities recommend the following combination used locally

℞	Mentholis	gr xl	2	65
	Petrolati liq	℥i	30	

M. Sig Apply locally with a swab

Sir Andrew Clark recommended the following combination to overcome the irritability of the nasal mucous membranes

℞	Quin hydrochloratis	ʒi	4	
	Glyceriti acidi carbol	℥i	30	

M. Sig Apply locally on a swab

In cases of asthmatic attacks the following combination is recommended

℞	Kalii iodidi	gr v		30
	Spts ammon. arom			
	Tinct gentianæ co, āā	m xx	1	20
	Aquæ q s ad	f℥i	30	

M. Sig To be taken at one dose, and such a dose repeated three times a day Or

℞	Liquoris trinitrini (1 per cent)	m ss		03
	Spts etheris nitrosi	m xx	1	20
	Spts chloroformi	m v		30
	Aquæ q s ad	f℥i	30	

M Sig To be taken at one dose, and such a dose repeated every four hours

By inhalation the following combination is recommended

℞	Pulv lobeliæ			
	Pulv stramonii			
	Pulv theæ			
	Potass nitratis, āā	ʒi	4	

M. Sig A small amount to be ignited and the fumes inhaled

The general tone of the patient's nervous system must be improved with such preparations as arsenic, iron, phosphorus and strychnin. For this, the following combination is of value

℞	Kalii bromidi	gr xv	1	
	Liq arsenicalis	m iii		20
	Tinct gentianæ co	m xxx	2	
	Aquæ q s ad	f℥i	30	

M Sig To be taken at one dose, and such a dose repeated after each meal, well diluted in water

Angina Pectoris

In the same periodical Hugh Barber, in writing on the subject of angina pectoris, states that in this disease there is atheromatous degeneration of the coronary arteries, producing narrowing of their orifices The heart may show myocardial changes The pain is due, according to Hughes, to the involvement of the cardiac plexus and radiates to adjacent nerves

The treatment recommended is as follows

RELIEF OF THE ATTACK.

In a severe attack of angina pectoris inhalation of amyl nitrite is recommended at once by breaking a capsule containing three minims of this preparation and instructing the patient to inhale it. If good results do not follow this treatment within a minute or two he recommends that chloroform be tried applied on a sponge in a smelling bottle and inhaled, the patient holding the bottle himself If the pain is severe and persistent, a hypodermic injection of morphin is recommended, given in ¼ grain doses (015) If the patient is feeble he counteracts the effects of the morphin by administering strychnin, grain 1/40 to 1/30 (0015 002) At the same time the following combination may be taken by the mouth as a heart stimulant

℞	Spts etheris			
	Spts ammon arom, āā	m xxx	2	
	Aquæ camphoræ q s ad	f℥i	30	

M Sig To be taken at one dose, well diluted

As an alterative for amyl nitrite, he recommends one or two minims (06 12) of the liquor trinitrini (B.P), which is equal to 1 per cent solution of nitroglycerin. As he states that this latter preparation will give relief in some cases in which amyl nitrite fails, sodium nitrite in doses of from 2½ to 5 grains (15 30) is advised for the pain when it is not readily relieved by the amyl nitrite Vapors such as iodid of ethyl or bromid of ethyl may be tried in stubborn and intractable cases

In mild cases, or those in which the pain persists after the attack is much relieved, *hot applications should be applied to the* precordium After the attack has passed the patient should be instructed to rest, avoiding all excitement and restricting himself to a light diet and avoiding alcoholic stimulants

If such attacks recur Barber recommends that a course of nitrites be given similar to the following

℞	Liq trinitrini	m i		06
	Tinct card co	m xxx	2	
	Spts chloroformi	m x		65
	Aquæ q s ad	f℥i	30	

M Sig One such dose, to be taken three times a day

This dose should be gradually increased every fifth or sixth day until headache occurs and flushing is present The nitrates may be kept up for several weeks

The most difficult cases, according to the author, are those in which there is a tendency for the heart to become incompetent, as the liquor trinitrin (nitroglycerin) may increase such a tendency, while digitalis would cause the pain to return Such patients must be kept in bed or instructed to lie down while the nitroglycerin is being given, and instead of giving digitalis he recommends caffein and nux vomica, combined as follows

℞	Liq trinitrini	m i		06
	Caffeinæ citratis	gr v		30
	Tinct nucis vomicæ	m viii		50
	Syr aurantii	fʒss	2	
	Aquæ q s ad	f℥i	30	

M Sig : One such dose three times a day

TO AVOID ATTACKS

A patient who is subject to attacks of angina pectoris should regulate his life in such a way that he may avoid all forms of excitement. Physical exertion, over filling of the stomach and emotion should be avoided as the most important factors in bringing on an attack Other causes, such as mental excitement, business worry, anger, exposure to cold, the ingestion of tea, tobacco, coffee and alcohol, are all exciting factors which may bring on an attack and should be avoided The clothing should be warm in winter The diet should consist of boiled fish, eggs lightly boiled and milk puddings The patient should be instructed to drink plenty of water Vegetables and such other foods as are liable to cause flatulence should be avoided Regularity in eating should be instituted and supper omitted

The bowels must move daily and regularly If necessary, a pill containing aloes and nux vomica with an occasional dose of calomel, may be given

As a tonic to the digestive tract the *following combination* is recommended

℞	Sodii bicarb	gr xx	1	20
	Tinct aurantii	m xx	1	20
	Infus calumbæ	f℥ss	15	
	Aquæ chloroformi q s ad	f℥i	30	

M Sig At one dose Or

℞	Acidi nitro hydrochlor dil	m x		60
	Tinct nucis vomicæ	m viii		50
	Tinct aurantii	m xx	1	20
	Aquæ q s ad	f℥i	30	

M Sig To be taken at one dose, and [illegible] dose repeated after each meal in water

He also recommends potassium iodid in doses ranging from grains 10 to 20 (.65-1.20) three times a day, well diluted in water. Arsenic and strychnin when combined are serviceable in this disease, given as follows:

R	Liq strych hydrochlor			
	Liq potass arsenitis, āā	m. iii		20
	Tinct aurantii	m xx	1	20
	Aquæ q s ad	f℥i	30	

M. Sig One such dose three times a day.

In neurotic individuals potassium bromid is of value, given with the foregoing combination.

When anemia is present, with a valvular lesion of the heart, digitalis and iron may be combined, remembering, as he states, that the former may cause the pain to return:

R	Tinct digitalis	m x		65
	Liq ferri perchlor	m xv	1	
	Acidi citrici	gr v		30
	Syrupi limonis	fʒss	2	
	Aquæ q s ad	f℥i	30	

M. Sig To be taken at one dose.

Rhus Poisoning

The following combination is recommended by Loving, in the *New York Med Jour*, for the treatment of rhus poisoning:

R	Chloralis hydratis	ʒii	8
	Sodii hyposulphitis	℥i	30
	Aquæ dest.	Oi	500

M Sig Keep the inflamed parts covered with a cloth constantly saturated with the solution.

In case the foregoing combination fails to produce the proper results, Loving recommends that the official black wash be applied locally.

Pruritus Ani.

In the treatment of pruritus ani, Hirschman, in the *Physician and Surgeon*, recommends that a saturated solution of boric acid be employed as a local wash, as it is not only a cleansing agent, but produces a cure in some cases. An ointment prepared as follows may then be applied:

R	Hydrarg chloridi mitis	ʒss	2
	Adipis q s ad	℥ss	15

M Ft unguentum Sig Apply locally.

He emphasizes the importance of calcium chlorid given internally in the following combination:

R	Calcii chloridi	ʒii	8
	Tinct aurantii flores	fʒvi	24
	Aquæ chloroformi q s ad	f℥vi	180

M. Sig One or two tablespoonfuls three times a day, one hour before meals.

If any disturbance of the stomach should arise the dose may be reduced.

Sodium thiosulphate is in some cases of value, applied as follows:

R	Sodii thiosulphatis	ʒiii	12
	Aquæ dest	f℥vi	180

M. Sig Apply locally after thoroughly cleansing the parts.

Ringer recommends the following:

R	Acidi salicylici	ʒii	8
	Olei myristicæ	fʒiss	6
	Cetacei	ʒiii	12
	Olei theobrom	ʒv	20

M Sig Apply locally night and morning.

Acute Articular Rheumatism

The following outline of treatment is recommended by Shoemaker in the *Med Bulletin* in the treatment of acute articular rheumatism. Salicylic acid combined with soda is the most preferable combination, and if the pain is severe, codein may be given in conjunction with them as follows:

R	Sodii salicylatis	℥ss	15	
	Codeinæ sulphatis	gr vi		36
	Glycerini	f℥i	30	
	Tincturæ cardamomi co	f℥i	30	
	Aquæ q s ad	f℥vi	180	

M Sig Two teaspoonfuls in water every three hours.

If the codein is omitted from the foregoing combination, the dose may be repeated once every hour for five or six doses.

In addition to the foregoing internal treatment the application of lead water and laudanum to the parts involved is often of value in relieving the extreme pain if accompanied by inflammation and swelling.

After the temperature has returned to normal it is recommended that some alkali, such as sodium bicarbonate or the iodid, may be added to the salicylate, later the salicylate may be discontinued and the alkali alone kept up until complete convalescence. The diet must be regulated to suit the individual and his digestive capabilities. So long as there is fever it is better to confine the patient to a liquid diet consisting chiefly of milk, and the patient should be encouraged to drink as much water as possible. In case constipation is present, the following pill is recommended as necessary to correct this condition:

R	Massæ hydrarg			
	Ext colocynth co			
	Pulv jalap co, āā	gr xx	1	30
	Olei menth pip	mi		06

M Ft pillulæ No xx Sig One pill, as necessary, to relieve the constipation.

Some authorities recommend the following combination as a pleasant one in the treatment of acute rheumatism:

R	Sodii salicylatis	ʒiii	12
	Syrupi zingiberis	℥i	30
	Aquæ q s ad	℥vi	180

Fiat mistura Sig One tablespoonful every three hours.

The following combination of ammonium and sodium salicylate is said to be a very efficient combination and is devoid of unpleasant symptoms:

R	Sodii bicarb			
	Ammonii carb, āā	gr v		30
	Acidi salicylici	gr xx	1	30
	Aquæ q s ad	℥i	30	

M Sig To be given at one dose and repeated every two hours for three doses and then once in four hours.

Those who have a preference for salicin may find the following combination of service:

R	Salicini		
	Potass bicarb		
	Sodii bicarb, āā	gr xii	75

M Ft chart No i Sig One such powder dissolved in half a glass of water every three hours.

Locally to the joints the following liniment is of service in rendering the pain more endurable and in lessening the swelling:

R	Acidi salicylici	gr cxx	8
	Alcoholis	f℥i	30
	Olei ricini	f℥iss	45

M Fiat linimentum

Sig Apply locally to the affected joints.

Medicolegal

Neither County Nor Members of Board of Health Liable for Quarantine Through Mistake or for Loss of Crops

The Supreme Court of Iowa says, in the case of Beeks vs. Dickinson County and others, an action for damages, where a farmer and his family were quarantined by the local board of health of the township on the mistaken supposition that there was a case of smallpox in the family, that it is the settled law of Iowa, as well as the general rule, that municipal corporations are not liable for the negligence of their officers or agents in executing health regulations adopted for the purpose of preventing the spread of contagious diseases. In so far as a municipality undertakes the duty of making and enforcing quarantine regulations and other laws for the promotion of the public health, it is performing governmental functions, and its officers are not agents for whose action or inaction it is liable unless such liability is imposed by its charter, or by the laws of the state under which it exists. Furthermore, it was probably true that the officers in question were not strictly municipal officers or agents so as to render the county liable for their acts in any event. They became health officers by virtue of the statute which fixed the tenure of office also. While such officers are elected in townships, they are elected in obedience to the statute, to perform a public service not peculiarly local or corporate but as state officers with such powers and duties as the statute confers on them.

The plaintiff, in addition to claiming that the county was liable generally for the alleged negligence of the local board of health, contended that the local officers had promised that the county would provide him with the necessary help for tak ing care of his crops, as well as that, because the statute made the county liable in the first instance for the care of infected and quarantined persons, it was liable for the value of his crops which had been lost The court replies that section 2568 of the Iowa Code creates local boards of health, and makes it the duty of such boards to make such regulations as are necessary for the protection of the public health, and to proclaim and establish quarantine against all infections or contagious diseases dangerous to the public, and section 2570 provides for the care of infected persons and for the payment of the expenses incurred on account thereof The statute neither expressly nor by implication provides for anything more, and the court is not at liberty to read into it an enlarged liability It is also very clear that the members of the local board of health had no power to create a liability not imposed by law, even if they had acted under the direction of the board of supervisors The liability that may be incurred by such boards is fixed by law and beyond this neither can go

Taking up the question of whether the members of the local board of health were individually liable for the loss of the plaintiff's crops, the court says that the statute makes it the duty of health officers to quarantine against "all infectious or contagious diseases dangerous to the public," and it can not well be questioned that the defendants were acting within the scope of their duty as such officers, and that in establishing the quarantine they were acting in a quasi (as it were) judicial character They were vested with the power to determine whether an infectious or contagious disease existed in the plaintiff's family, and if found to exist, their duty under the statute required them to take the proper steps to prevent its spread, and had they neglected to do so they would have been culpable in a high degree They were, therefore, acting judicially, and it is the general rule that officers so acting are not liable for injuries which may result from such acts performed in the honest exercise of their judgment, however erroneous or mistaken the action may be, provided there be no malice or wrong motive present

In some cases an exception to this general rule has been recognized, and the individual officers have been held liable because of the maxim that where there is a wrong there is a remedy This court is of the opinion, however, that where the public health is involved this rule should not be applied, notwithstanding the fact that courts of great ability have so held It is the modern tendency of judicial opinion to hold that the public health is the highest law of the land and "whenever a police regulation is reasonably demonstrated to be a promoter of public health all constitutionally guaranteed rights must give way to be sacrificed without compensation to the owner"

Nor does this doctrine necessarily conflict with the maxim referred to As already stated, this board of health was a creation of the statute and its paramount duty was to protect the public health, its duty, then, was to the public and not to any individual member thereof, except to act honestly and without design to injure him If a health officer fails to do his duty no individual may complain, for the duty is public and the officer is not charged with any individual duty to any particular person If there be no liability for an omission of public duty, it would seem to follow without question that an erroneous performance should not subject the officer to personal liability It may, it is true, cause an injury to the individual, but it is not a wrong because the officers owe the individual no duty beyond that already stated This rule should not be so extended as to protect health officers who act without the scope of their authority, or who act with gross negligence amounting to malice

It is unfortunate that any individual should suffer loss because of a mistake as to the existence of a dangerous contagious disease, and yet the welfare of the public is of such paramount importance that a rule should not be established which will have the necessary effect of increasing the public danger If health officers, acting in perfect good faith and as their judgment dictates, are held liable for a mistake in judgment, the effect on the public health can not be doubted For instance, many competent physicians have never been brought into actual contact with smallpox, and many mistakes have been made in diagnosing diseases which later prove to be highly contagious Whole communities have been exposed and suffered because of mistakes in judgment and overcaution for the liberty of the individual If a civil liability is to be imposed because of a quarantine which is later proved unnecessary, the danger to the public will be greatly enhanced, and the effectiveness of the statute greatly impaired This court does not feel like announcing such a rule, nor does it believe justice to the individual requires it

Liability for Negligence of Nurse in Sanitarium

The Supreme Court of Louisiana says, in the case of Stanley vs Schumpert and others, that a physician suggested to the plaintiff (his patient) that during the treatment of his eyes he should stay at a certain sanitarium The physician prescribed a mild solution to be applied under the direction of a trained nurse But one day one of the nurses in the institution, who happened to be in charge of this patient's ward undertook to administer the solution. Instead, however, of administering the mild solution prescribed, through negligence she put the dropper into alcohol and dropped alcohol freely into the patient's eye The injury, if any, was very slight although the alcohol caused intense pain

An action for damages was brought Two of the defendants the court says, were not the owners of nor connected with the management of the sanitarium at the date of the accident Suit against them did not lie They were not liable But the third defendant, at the time the lessee of the sanitarium who was alone responsible for its management, the court holds was liable for nominal damages, fixed in this case at $25, for the suffering, though momentary, which the negligent mistake occasioned.

An attendant in a sanitarium, the court holds, should be careful, and it is the duty of those in charge to compel the nurse to be careful, and not to neglect the patient who is under the care of the sanitarium, and to whom it must see, to some extent at least, that medicines are properly administered Again, the court says that a nurse should exert her best endeavors to avoid mistakes of any kind, as they are sometimes attended in the sick room with the saddest consequences The proprietor of a drug store has been held liable for the mistake of his clerk The general responsibility of a druggist and of his clerk is greater than are the duties of the nurse Nonetheless, the functions of the nurse are sufficiently important to render her and her employers liable in damages for inflicting pain negligently This nurse was employed by the sanitarium and had charge of the plaintiff's case in accordance with his contract of employment She was acting for the sanitarium under the direction of the plaintiff's physician Her duty was to carry out the orders of this physician, and it was the duty of the sanitarium to see that she carried out the orders devolving on her as a nurse The physician could have had another nurse called in her place, but he had no right to discharge her The management of the sanitarium had the right of control and of discharge.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Boston Medical and Surgical Journal.

September 29

1 *New Foundation of the Medical School J C Warren Boston
2 *The Faculty of Medicine W L Richardson Boston
3 *The Laboratories T Dwight Boston
4 *The Clinics F C Shattuck, Boston
5 *Acceptance of the Buildings C W Eliot Boston
6 *Diseases of the Bile Passages Including the Liver Gall Bladder and Pancreas M H Richardson Boston.
7 Diseases of the Biliary Passages Including the Liver the Gall Bladder and the Pancreas E C Cutler Boston
8 *An Experimental Study on the Bactericidal Power of Various Silver Preparations C S Derby Boston
9 Case of Pyloric Spasm in an Infant. J L Morse Boston

1, 2, 3 4, 5—See abstracts in The Journal, Oct. 6, 1906 pages 1113, 1114 and 1115

6 Diseases of Bile Passages—The rule by which Richard

son has been guided and which he has rarely, if ever, had occasion to regret, is that when symptoms exist in the right upper quadrant which are of a chronic character, when the attacks of pain or distress continue especially at irregular intervals, and when the attacks of pain in any form suggest the presence of gallstones, exploration is indicated, particularly when palliative measures have been employed in vain for a reasonable length of time When later signs confirm the existence of gallstones, any measures other than surgical are unreasonable and ineffectual

8 **Bactericidal Power of Silver Preparations**—Derby compared the bactericidal power of nitrate of silver and some of the newer silver preparations for which so much has been claimed by their manufacturer The preparations tested were purchased in original bottles from reputable wholesale firms The *Staphylococcus aureus* was utilized for the work The following silver preparations were tested nitrate of silver, argyrol, protargol, collargol, largin, ichthargan, albargin, argonin and argentamin Solutions of nitrate of silver varying in strength from 0 5 per cent to 2 per cent killed the *Staphylococcus aureus* in from two to five minutes An exposure of 30 seconds to the 0 5 per cent solution was generally sufficient to prevent a growth in 24 hours, but not sufficient to kill all the cocci The bactericidal action of protargol is efficient, though not so efficient as that of nitrate of silver The microörganism is usually killed by a 2 per cent or a 4 per cent solution at the end of from three to five minutes, though occasionally a few colonies will grow after ten minutes' exposure An exposure of one minute will usually prevent a growth of the germ in 24 hours Solutions of the same strength will kill the pneumococcus in one minute The bactericidal power of collargol is comparatively weak, as a growth of the *Staphylococcus aureus* could be obtained at the end of 20 minutes, using the 4 per cent solution With a 1 per cent solution a growth was obtained at the end of one hour Albargin in 10 per cent and 20 per cent solutions killed the *Staphylococcus aureus* in from two to five minutes The 1 per cent solution gave a growth after 15 minutes' exposure In ichthargan solutions varying in strength from 1/10 per cent to 1 per cent., there was no growth after from one to four minutes With argentamin, ethylenediamine silver nitrate, practically the same results were obtained with a 5 per cent solution of this drug as with ichthargan Largin, silver protalbin, is an efficient bactericide. The *Staphylococcus aureus* was killed by a 10 per cent solution in from two to five minutes With argonin, argentum casein, no growth could be demonstrated after from three to six minutes The bactericidal power of argyrol is exceedingly weak In a large series of observations a growth of the *Staphylococcus aureus* was obtained after exposure to the 10 per cent, 25 per cent and 50 per cent solutions for one hour, one hour and two hours respectively A diminution in the number of colonies commonly appeared at the end of 20 minutes Its action was uncertain and while occasionally the germs were affected by a 20 minute exposure more often the cultures taken at the end of one hour showed a growth when examined 24 hours later The age of the solution did not appear to be of importance

New York Medical Journal

September 29

10 *Case of Myoclonus Epilepsy, with Autopsy C W Burr Philadelphia
11 Observations in the Tropics L. L. Seaman New York.
12 *Gunshot Wounds of the Spinal Cord I S Haynes New York.
13 *Drugs in Diabetic Glycosuria. A. C Croftan Chicago
14 *Posterior Gastroenterostomy Extreme Gastroptosis Motor Insufficiency Epilepsy Apparent Cure J Burke, Buffalo
15 Pathologic Physiology B Robinson Chicago
16 Etiology of Uterine Fibroids D H Griffith Dunbar Pa
17 *Case of Westphal's Pseudosclerosis. F T Simpson Hartford, Conn

10 **Myoclonus Epilepsy**—The patient whose history is reported by Burr died of acute pulmonary tuberculosis after he had been under the author's care for ten years The most marked lesions found at the necropsy were smallness of the right cerebellar hemisphere, decrease in the number of cells of Purkinje in both lobes and thickening of the arachnoid with obliteration of the right posterior lacerated foramen Burr thinks that these changes were caused by disease during intrauterine life or soon after birth, and that the cerebellar changes instead of being the sole cause of the patient's condition were simply a part of the general process resulting in the production of a poorly developed brain

12 **Gunshot Wounds of Spinal Cord.**—Haynes presents the statistics of 46 cases collected by him from the literature covering the period from 1896 to 1906 His paper also contains the statistics of Prewett's 42 cases collected from the literature of 1879 to 1896 Haynes makes a plea for early myelorrhaphy and reports a case of bullet wound through the liver, spinal column and cord in which laminectomy was performed successfully and the patient recovered

13 **Drugs in Diabetic Glycosuria**—Croftan claims that none of the remedies recommended for the cure of diabetes can exercise a curative effect on the disease proper, and that only a few appreciably influence the excretion of sugar In vaunting the efficacy of any drug in diabetes the element of suggestion should always be considered, particularly when a new drug of much heralded efficacy is tried for the first time Among the drugs discussed by Croftan are opium and its alkaloids, nerve sedatives, preparations of salicylic acid, jambul, alkalies, potassium iodid, and intestinal antiseptics

14 **Epilepsy and Gastroenterostomy**—Burke reports a case of epilepsy occurring in a woman of 33 There existed a total gastroptosis, the greater curvature rested on the pubes, the lesser at the umbilicus There were marked muscular insufficiency and ectasy with the consequent deficient drainage Medicinal and mechanical treatment were used to the limit of patience and endeavor without improvement, and a posterior gastroenterostomy was made to improve gastric drainage This, he says, was a case in which the result justified the attempt, and the operation apparently cured a case of genuine epilepsy

17 **Westphal's Pseudosclerosis**—Simpson reports a case of this kind occurring in a girl 21 years old, whose mother and father were cousins One uncle and one aunt have been insane Her father died at 59 of heart disease, her mother is well Two younger sisters are reported as well The disease began five or six years ago, and all the symptoms have been typical The features of Westphal's pseudosclerosis present in this case are 1 Psychoses in the antecedents 2 In the initial period slight mental deterioration, apathy, followed by irritability and resulting in dementia 3 Remission in the course of the disease, progressive course 4 Vertigo and headaches 5 Disturbance of speech, slow, becoming incomprehensible 6 Slowness of muscular movements 7 Spastic paresis, transitory then lasting 8 Increased tendon reflex. 9 Tremor and ataxia of upper extremities 10 General weakness, walking uncertain 11 Hypesthesia

Medical Record, New York.

September 29

18 *Percussion of the Skull as a Means of Placing the Indication for the Performance of Lumbar Puncture H Koplik, New York
19 *Problem of Localization in Relation to Head Injuries. W W Graves St. Louis
20 *Surgical Treatment of Trigeminal Neuralgia. L. V Moschcowitz New York
21 *One Hundred and Three Cases of Epilepsy W L. Stowell New York.
22 *A Plea for a More Thorough Course in Practical Pharmacy in Our Medical Schools M C. Thrush Philadelphia.
23 *Some Points on the Diagnosis and Treatment of the Pretuberculous State C F Dlsen Minneapolis
24 *Examination of the Feces of Twenty Five Starch fed Infants, with a Few Clinical Observations J H Lopez, Philadelphia
25 Supparating Omental Hernia. F R McCreery New York

18 **Percussion of Skull as Indicator for Lumbar Puncture.**—Koplik states that percussion of the skull affords a means of detecting acute hydrocephalus, whether caused by acute distension of the ventricles on the first day of a cerebrospinal meningitis, or during the slow insidious onset of a tuberculous meningitis When the lateral ventricles are distended with serous fluid the percussion note at a given spot varies according to the position of the head While the person sits with head upright, the most resonant note is brought out by percussion of the skull by means of the finger toward the basal level of the frontal bone and the squamous part of the parietal

bone On the lower bone, as the head is inclined to one side, percussion gives a tympanitic note In cases of acute distension of the ventricles lumbar puncture is a life saving operation Koplik considers percussion of the skull the only definite means of determining whether there is an increase of fluid in the ventricles or the subarachnoid space causing pressure effects, and therefore demanding immediate relief He cites a number of cases in point

19 **Localization in Relation to Head Injuries**—Graves declares that a satisfactory solution of the problem of localization in traumatic lesions of the brain depends on a consideration of all symptoms and their order of development, the degree of consciousness manifested by the patient and his reactions to stimuli, a degree of involvement of areas of the brain of known function sufficient to cause focal symptoms, the carefulness and thoroughness with which the examination is made

20 **Surgical Treatment of Trigeminal Neuralgia**—Moschcowitz says if the supraorbital, infraorbital, mental, malar, or inferior dental branches, either singly or collectively, are involved, the nerve should be divided and the foramen plugged by a gold or silver wire or button If the superior or inferior maxillary nerve is involved, Abbe's operation is indicated A celluloid or gold button should be substituted for the rubber tissue He believes that by following these suggestions the extirpation of the Gasserian ganglion will be rendered unnecessary

21 **One Hundred and Three Cases of Epilepsy**—Stowell gives the summary of his notes on 103 cases of epilepsy

22 **Practical Pharmacy in Medical Schools**—Thrush reviews the curricula of various medical schools and points out the deficiency in the instruction in practical pharmacy He declares that on examination 1 3 per cent of the prescriptions written by recent graduates were found to contain dangerous combinations that would have resulted seriously if they had been given as ordered Thrush urges that every medical student should be thoroughly trained in practical prescription writing and dispensing

23 **The Pretuberculous State**—Disen classifies patients in two groups, the acid and the alkaline He believes that the alkaline type is far less immune to tuberculosis than the acid one He tests both urine and blood to determine the type with which he is dealing He describes his methods in detail

24 **Starch fed Infants.**—Lopez tested the digestion of 25 starch fed infants and is convinced from his work that they do healthfully digest starch

The Journal of Infectious Diseases, Chicago

September 29

26 *Specialism in Its Modern Significance A B Hale Chicago

26—See abstract in The Journal Oct 24, 1903, page 1041

The Journal of Infectious Diseases, Chicago

June 30

27 Statistical Study of Generic Characters in the Coccaceæ C E A Winslow and A F Rogers
28 Toxic Effect of Certain Acids on Typhoid and Colon Bacilli in Relation to the Degree of Their Dissociation. C E A Winslow and E E. Lochridge
29 *A Contribution to the General Principles of the Pharmacodynamics of Salts and Drugs A P Mathews Chicago
30 *Studies on Simple and Differential Methods of Staining Encapsulated Pneumococci in Smear and Section A. Wadsworth New York
31 *Liver Necrosis and Venous Thrombosis in Horses Actively Immunized with Diphtheria and Tetanus Toxins and with Streptococci and Their Products H D Pease and R. M Pearce Albany N Y
32 A Fundamental Error in Current Attempts to Apply Physical Chemistry to Serum Pathology W H Manwaring Bloomington Ind
33 Third Serum Component W H Manwaring Bloomington Ind.
34 *Cause of Green Coloration of Bacterial Colonies in Blood agar Plates G F Ruediger Chicago
35 *Generalized Blastomycosis E E Irons Chicago and E A Graham
36 *Rôle of Phagocytosis in the Pneumococcidal Action of Pneumonic Blood F C Rosenow Chicago

29 **Pharmacodynamics of Salts and Drugs**—Mathews concludes that the action of salts on the protoplasmic system is due chiefly to the actions of the ions of the salt The particular result obtained is caused in part at least by the substitution of the ions in the protoplasmic system by the ions of the salt solution used The power of different ions to upset the ordinary state of the protoplasmic system depends on the difference between the potential energy content of the ion which is replaced, and that which is reintroduced This difference in the potential energy content is determined by the difference in the intensity factor of the potential energy of the ions—i e, by difference in the ionic potentials It is shown that a good numerical relation exists between the available potential energy of any salt and its minimum fatal dose, so that for simple systems the minimum fatal dose can be very closely calculated from the available potential energy of the salt, if certain constants are known. The character of the action of any given salt solution on protoplasm must of necessity depend on the character of the ions, metal and metalloid already in combination with the protoplasm This results as a necessary consequence of the theory, and it explains the fact that toward different cells, and toward the same cell after exposure to different salt solutions, the same salt solution may exert a different action, being at times stimulating, at other times depressing Mathews thinks that the action of organic drugs will be found to depend, in part at least, on the available potential energy of the dissociated particles of the drug

30 **Staining Encapsulated Pneumococci.**—Wadsworth finds fixation with 4 per cent formalin most satisfactory for smears This may be followed by gentian violet, or the Gram differentiation method may be employed To demonstrate encapsulated pneumococci in smears of sputum, albumin in the form of blood serum (Hiss) or egg albumin (Boni) must be added and thoroughly mixed before making smears In staining sections of tissue it was found necessary, in order to secure sufficient penetration, to inject the tissue with the hardening fluid (formalin) or to cut the material into small bits or thin slices The Gram method of staining the sections was found the most useful on account of the virtue of its differentiation

31 **Liver Necrosis and Venous Thrombosis.**—Pease and Pearce found in a series of 12 horses, actively immunized with the products of certain pathogenic microörganisms, widespread liver necrosis in 9 and localized liver necrosis in one Thrombosis of the portal vein was present in 3, of the splenic vein in 2, and of the branches of the pulmonary artery in one, of the 9 horses showing widespread necrosis One horse had thrombosis of the branches of the portal veins and another of the pulmonary artery without the liver necrosis The evidence leads them to conclude that the toxic bacterial products injected are directly and indirectly responsible for the production of the liver necrosis and not such materials as peptones, beef extractives and antiseptics They could not determine what factors were responsible for the venous thrombosis

34 *Green Coloration of Bacterial Colonies*—Ruediger has found that the green coloration of bacterial colonies in blood agar plates is dependent on the production of an acid and the action of this acid (probably lactic acid) on the red corpuscles

35 **Generalized Blastomycosis**—Irons and Graham report the following case of systemic blastomycosis A lumberman, aged 47, noticed in March, 1905 a nodule on the right thigh which "broke" and healed slowly with ulceration Soon other similar lesions appeared on the forehead and extremities Weakness slight fever and swelling of the ankles set in When first seen (September, 1905) numerous healed and partially healed superficial lesions resembling blastomycetic dermatitis, as well as subcutaneous abscesses were present Soon cough set in with dulness and râles over the lungs and the appearance of blastomycetes but no tubercle bacilli in mucopurulent, occasionally blood stained sputum New external lesions with sloughing extensive dissection and even denudation of bone appeared, with increasing anemia leucocytosis fever and death, January, 1906 The autopsy showed multiple subcutaneous abscesses and sinuses involving the face, scalp and extremities erosion of the left parietal bone deep sloughing ulcer of the right thigh numerous superficial ulcers and scars miliary blastomycosis of the lungs and spleen ulcerative blastomycotic bronchopneumonia retroesophageal abscess with erosion of the [illegible] the thyroid cartilage fibrous pleuritis,

and heart, and enlargement of the spleen and mesenteric lymph nodes Microscopically the nodules showed necrotic centers surrounded by a zone of giant cells and new tissue cells The giant cells all contained organisms which also occurred free Occasionally a bronchiole was found in the center of an area, blastomycetes were present in a large blood vessel in the lung near a focus, blastomycetes were present in the retro esophageal abscess and in the cellular foci in the spleen—no giant cells were seen here No amyloid cultures of blood during life were sterile, cultures from sputum and pus gave blastomycetes Streptococci were isolated after death from the cerebrospinal fluid, liver, spleen and kidney, the *Staphylococcus pyogenes aureus* was isolated from the liver, spleen and retro esophageal and knee abscesses Blastomycetes (present in lesions) after death were isolated only from the kidney They were virulent for guinea pigs and rabbits, causing local abscess and general miliary blastomycosis

36 **Phagocytosis in Pneumococcidal Action of Pneumonic Blood.**—Rosenow has studied thoroughly phagocytosis of pneumococci *in vitro* under various conditions Non virulent strains of pneumococci are readily taken up by human leucocytes in the presence of normal serum and the phagocytosis is roughly proportional to the amount of serum present Washed leucocytes do not take up the organisms Virulent strains are not taken up by the leucocytes under any conditions, but as they lose their virulence by cultivation they become susceptible to phagocytosis As a rule, pneumococci isolated from the blood of patients before, during or after crisis are not taken up *in vitro* by the patient's blood or by any other blood. The opsonin for pneumococci is nearly destroyed by heating to 60 C for one and one half hours Rosenow's experiments seem to show that in some cases during and shortly after crisis there is a slight increase in the opsonic content of the patient's blood and that in fatal cases it may fall below normal The pneumonic leucocytes are more actively phagocytic than normal leucocytes and also more resistant to heat He concludes that the pneumococcidal action of pneumonic or other bloods is due to the combined action of the serum and the living leucocytes through phagocytosis and subsequent intracellular digestion The serum of normal or pneumonic individuals has no bactericidal effect whatever on pneumococci In view of such facts as the failure of pneumococci isolated from the blood to be taken up by leucocytes the phenomenon of crisis and healing in pneumonia can not be attributed solely to phagocytosis

Surgery, Gynecology and Obstetrics, Chicago

September

37 *Atonia Gastrica in Relation to Cholelithiasis. A. Rose, New York.
38 Artificial Dilatation of the Cervix. L. Knapp, Chicago
39 Cesarean Section Necessitated by Obstruction of Pelvis by Non Pregnant Half of Bi-Cornate Uterus. G S. Brown, Birmingham Ala.
40 *Some Mooted Questions Pertaining to Prostatectomy C. G Cumston, Boston.
41 *Operation of Choice in Chronic Obstruction of the Intestine Due to Malignant Stricture. J De V Singler Pittsburg.
42 *Enormous Elephantiasis of Both Legs Surgically Treated. P F Rogers Milwaukee
43 *Case of a Lithopedion S C. Beede David City Neb
44 The Contest with Cancer of the Uterus. Professor Dührssen Berlin.
45 Study of the Development of Extrauterine Decidua. W H Lamborn Chicago
46 Malignant Disease of the Bowel—Chronic Interstitial Obstruction G P LaRoque, Richmond
47 *Treatment of Placenta Prævia Centralis by Cesarean Section A P Condon Omaha, Neb
48 *Induction of Premature Labor and Accouchement Forcé in the First Five Thousand Labors in the Obstetrical Department of Johns Hopkins University J W Williams Baltimore
49 Infection of Ovarian Cystomata. H C Coe New York.
50 *Ovarian Cysts Situated Above the Superior Pelvic Strait, Complicated by Pregnancy C. L. Patton Springfield Ill
51 Choice of Methods for Dilating the Gravid Uterus E P Davis Philadelphia.
52 Truth About So-called Maternal Impressions A. Dixon Henderson Ky
53 Retention of Drainage-Catheters. J R. Eastman Indianapolis
54 Technic of the Examination of the Urine and Feces in Suspected Cases of Disease of the Pancreas P J Cammidge.
55 Directions for Nurse and Home Physician Burnside Lying in Hospital Toronto A. H Wright, Toronto

37 **Atonia Gastrica and Cholelithiasis**—Rose points out that the treatment of gastroptosis by a plaster bandage may be the most rational prophylactic measure to prevent stasis of bile and consequently the formation of gallstones

40 **Prostatectomy**—Cumston believes that all patients should be operated on, when an absolutely aseptic catheterization for any length of time is not possible To this class belong those who can not carry out catheterization themselves on account of senile tremor, blindness or some similar infirmity There is also that large group in which catheterization is necessary often, or in which it is associated with pain or hemorrhage, or is rendered difficult by false passages, and so forth In all instances in which vesical calculi are present at the same time, and result from the hypertrophy, operation should be done, otherwise recurrences of the calculi will take place, and it may be said that prostatectomy is more dangerous than lithotrity under these circumstances Finally, all patients who have cystitis should be operated on, and last but not least, all those in whom there is the slightest suspicion of malignancy, and in whom the disease is apparently in its early stages, should be radically treated Perhaps the ever advancing development of surgery will make prostatectomy such a safe operation that the scope of its indications may be enlarged, but in the meanwhile the excellent work being done will be injured if surgeons persist in persuading patients, who can live comfortably for many years with a catheter life to undergo an operation the good results of which can not always be guaranteed.

41 **Obstruction of Intestine by Malignant Stricture**—Singley urges the value of extraperitoneal inclusion of malignant stricture of the intestine to be dealt with subsequently according to some of the methods that have been pointed out especially the improved operation of Mikulicz, for the following reasons 1, The *rapidity with which the primary operation* can be carried out, 2, the slight risk of infection, 3, the elimination of the danger of suture of diseased tissue, and 4 the low mortality

42. **Elephantiasis**—Rogers reports the case of a woman who had an enormous elephantiasis of both legs Although the patient was only 5 feet in height, she weighed 248 pounds Her thighs measured 38 and 39 inches in circumference, calves 29 and 31 inches, and ankles 29 inches The upper part of her body was thin and scrawny The process ended abruptly at the subgluteal fold, but the lower part of the abdominal wall was thickened and pendulous Repeated blood examinations by day and night failed to show any filaria Ten operations were done and after each a most decided improvement was noted

43 **Lithopedion**—Beede reports the case of a woman, aged 50, who menstruated last in July, 1905 He saw her for the first time in January, 1906, when she was suffering marked abdominal pain, most severe in the lumbar and inguinal regions The whole abdomen was tympanitic and tender She was vomiting had a rapid pulse, but a normal temperature The patient had been subjected for years to similar attacks On vaginal examination the uterus could be outlined in the anterior portion of the pelvis to the right of the median line Behind it, to the left, and extending in the cul de-sac below the level of the cervix, was a smooth, hard, round mass which appeared continuous with the posterior portion of the uterus Owing to the abdominal distension and muscular rigidity, the upper limits of the tumor could not be palpated The mass was crowded down into the pelvis, and seemed to fill it completely The vaginal walls were swollen and livid and general pelvic tenderness was marked The diagnosis of fibromyoma seemed so plausible that it was not questioned

On opening the abdomen the nature of its growth, its flinty hardness and irregularity of surface, showed it to be a lithopedion Without any difficulty, except that of disengaging it from the pelvis, *into which it was molded* like a plaster cast the growth was removed. The adhesions to surrounding parts were slight and required no ligatures, except at the two pedicles which corresponded to the Fallopian tube at the right and the ovarian vessels at the left The sac was distinct, but nearly transparent, thin and friable It was ruptured in the removal of the mass The fetus had developed to somewhat beyond the fifth month and both it and the placenta were rendered hard and brittle by the deposit of earthy salts The fetal head lay low down in the Douglas pouch, and through the swollen vaginal walls presented to the examining finger the precise sensation produced by a subperitoneal fibroid in that situation

47 Cesarean Section for Placenta Prævia.—Condon summarizes his paper as follows 1 In placenta prævia centralis, when the child is alive and viable, the procedure indicated is Cesarean section 2 The life of the unborn babe (when viable) is as much to be thought of as that of the mother 3 The operation of Cesarean section can be done more quickly than dilatation, version and extraction 4 The danger of a ruptured uterus and uncontrollable hemorrhage can be better overcome by section. 5 An obstetrician should not attempt a version unless he is capable of doing a Cesarean section

48 Premature Labor and Accouchement Forcé.—In the series of cases reported by Williams it was thought necessary to induce premature labor in 11 and to resort to *accouchement forcé* in 100 instances, as follows Induction of premature labor by Krause's method, 11, *accouchement forcé* by Harris' method of manual dilatation of the cervix, 83, *accouchement forcé* by Champetier de Ribes' balloon, 15, and *accouchement forcé* by vaginal Cesarean section, 2 The induction of premature labor by means of a bougie (Krause's method) was employed in all cases in which it was deemed advisable for the welfare of the mother to terminate pregnancy, but in which rapid emptying of the uterus was not necessary Harris' method of manual dilatation of the cervix was employed in 83 instances, as follows Eclampsia, 33, pre eclamptic toxemia, 7, placenta prævia, 12, and danger to mother or child during the course of labor, 31, *accouchement forcé* was resorted to in 33 cases of eclampsia, with 7 deaths As 5 of the patients did not regain consciousness after delivery their death must be attributed to the underlying disease On the other hand, 2 patients died as the direct result of the operation, one from infection and the other from incomplete rupture of the uterus *Accouchement forcé* by Harris' method was resorted to in 7 cases of pre eclamptic toxemia. In each instance the cervical canal was intact and the external os not obliterated. Preliminary dilatation by means of Goodell's or Hegar's dilators was necessary before Harris' method could be employed, and the operation was usually difficult and required considerable time Two of the patients died—one from toxemia and the other from incomplete rupture of the uterus, due to the operation

Accouchement forcé by Harris' method was employed in 12 cases of placenta prævia, in 4 of which the cervix was intact, while in 8 the cervical canal was obliterated and the external os more or less dilated Three patients died, 2 of whom were brought to the hospital in an exsanguinated condition, and died in collapse immediately after delivery, but in neither instance could the fatal termination be attributed to the operation, as there was no injury to the cervix The third patient, however, died from hemorrhage following an incomplete rupture of the uterus, which resulted directly from the manual dilatation of the cervix In 31 women who had already fallen into labor, dilatation of the cervix was completed manually by Harris' method when some condition had arisen which so seriously threatened the life of the mother or the child as to render the immediate termination of pregnancy necessary The following indications necessitated interference Intrapartum infection, 8, exhaustion, as indicated by a pronounced rise in the maternal pulse, 8, marked variations in the fetal heart rate, 5, prolapsed cord, 4, various indications, 6 With one exception, all the mothers recovered without difficulty, and the single death was due to profound disturbances resulting from a partial intestinal obstruction and an extensive thrombosis of the vesels of the left leg originating during pregnancy

The Champetier de Ribes balloon was employed in only 15 instances, viz Danger to mother or child, 12, eclampsia, 1, toxemia, 1, and placenta prævia, 1 All the patients recovered The cervix was uninjured in 6 cases, while it was slightly or deeply torn in 3 and 6 cases, respectively In two of the latter hemorrhage necessitated immediate repair Vaginal Cesarean section was employed twice, once for eclampsia and once for profound toxemia associated with twin pregnancy In both instances the operation was very successful from a technical point of view, although one of the patients died, partially from hemorrhage following uterine atony, and partially from the underlying intoxication

50 Ovarian Cysts.—Patton reports 3 cases and reviews 321 cases collected from the literature

Medicine, Detroit, Mich.

September

56 Treatment of Non Malignant and Non Tubercular Skin Lesions W S Newcomet, Philadelphia
57 Cause of Sudden Death Following the Injection of Horse Serum M. J Rosenau and J F Anderson, U S P H and M H S
58 Sal Ethyl in the Treatment of Rheumatic Affections L. W Bremerman New York
59 *Fifty Bacteriologic Tests of Hands Brushes Gloves Pasteur Filtered Water, Steam and Formaldehyde Sterilizers and Formaldehyde Disinfection of Rooms. A. Goldspohn Chicago
60 Obstetric Asepsis and Antisepsis J B De Lee Chicago
61 *Significance of Hydrochloric Acid Variation in the Stomach Contents E J Brown Decatur

59.—This article has appeared in the *Chicago Medical Recorder*, August 15, and the August issue of the *Illinois Medical Journal*

Illinois Medical Journal, Springfield.

September

62 Tonsillectomy by Electro-Cautery Dissection E Pynchon, Chicago
63 The Ottawa Tent Colony T W Pettit Ottawa
64 *Operative Treatment of Discharges from the Ear A D Prince, Springfield.
65 *The Logic of Abdominal Pain J L. Wiggins E. St Louis
66 *Treatment of Obesity and Its Complications. A. C Croftan Chicago
67 *The Brain a Good Field for Surgery as Shown by Its Disregard for Traumatism. C D Center, Quincy
68 Rheumatism. B Bachrach, Decatur
69 Violent Deaths in Chicago T G Allen Chicago

61, 66, 67.—See The Journal, June 9, 1906, page 1787

64, 65.—See The Journal, June 23, 1906, page 1966

New Orleans Medical and Surgical Journal.

September

70 Sanitary Science and Quarantine F J Mayer Scott La
71 Yellow Fever in New Orleans and Its Bearing on the Health of the State. J Carroll, Washington, D C.
72 Experiences During the Yellow Fever Epidemic of 1905 H D Bruns New Orleans
73 Vaginal Section Indications Limitations and Technic in Pelvic Suppuration C. J Miller New Orleans.
74 Spinal Analgesia in Forceps Delivery W T Richards New Orleans.

The Medical Herald, St Joseph, Mo

September

75 Fragmentary Clinical Therapy of the Static Current from the Generalist s Scrap Heap S G Burnett Kansas City
76 *Removal of the Uterus for Chronic Inflammation T C. Witherspoon St Louis
77 *Rachitis. A. E King Blockton Iowa

76, 77.—See The Journal, April 7, 1906, pages 10[illegible] 56

Washington Medical Annals.

Denver Medical Times

September

93 Treatment of Bronchial Asthma W A Lamont Denver
94 Id. J T Melvin Saguache
95 Id H C Brown Denver
96 Id. H W Rover, Denver
97 Laboratory Diagnosis for the Practitioner J C Todd Denver

Utah Medical Journal.

September

98 Epilepsy in Legal Medicine F Clift, Provo, Utah.
99 Value of Absolute and Relative Leucocyte Count as an Aid in Medical and Surgical Diagnosis. R. Anderson, Salt Lake City

Chicago Medical Recorder

September 15

100 Exploratory Laparotomy C E Humiston, Chicago
101 Membranous Rhinitis (Nondiphtheritic) C. M. Robertson, Chicago
102 Hay Fever W F Waugh Chicago
103 Causation and Treatment of Cataract. S E. Wright, Marinette Wis.
104 A Synopsis of Gout and Rheumatism B F Felch, Chicago
105 Treatment of Cystitis. J S Perekhan, Chicago

Iowa Medical Journal, Des Moines.

September 15

106 Chairman s Address Section of Medicine, Iowa State Medical Society E Grimes, Des Moines
107 Uric Acid Therapy C Van Epps, Iowa City
108 Measles in Adults W E Harriman Ames
109 Autointoxication W L. Hearst, Cedar Falls
110 Diagnostic Foibles H A. Minassian, Des Moines.
111 Gastric Neuroses. F J Murphy Sioux City
112 Effects of Abnormalities of Eye and Ear on the Mental and Physical Development of Children W J Bussey, Sioux City
113 President's Address Iowa Union Medical Society Cedar Rapids W C Post, Maquoketa.
114 Why Should the Medical Profession Be Thoroughly Organized? C. A. Boice Washington

The Journal of the New Mexico Medical Association, Albuquerque

September 15

115 Malaria J M. Shields Perea, N M
116 Fracture of the Astragalus J B Cutter, Albuquerque
117 Six Cases of Fracture of the Skull J W Elder Albuquerque
118 The Pretubercular Stage of Pulmonary Tuberculosis C F Beeson, Roswell
119 Medical Organization S D Swope Deming N M
120 Drinking Water F T B Fest, Las Vegas.
121 Pneumonia R E McBride, Las Cruces

The Laryngoscope, St Louis, Mo

February

122 Oto-Projectoscope. M A Goldstein, St. Louis.
123 Use of the X Ray in Sinus Disease. H P Mosher Boston
124 Significance of Edema of the Pharynx J E Schadle, St Paul
125 Case of Traumatic Mastoiditis S Oppenheimer New York.

Woman's Medical Journal, Toledo, Ohio

September

126 The Pneumococcus as a Cause of Single Multiple and General Infections M M S Johnstone Chicago
127 Variation in the Fat Percentage of Mother s Milk as a Factor in Feeding L Taylor Jones Washington D C

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

September 15

1 Prevention of Tuberculosis S G Dixon
2 Idem J Roberts
3 *General Analogies Between Tuberculosis and Influenza A W Gilchrist
4 Doubtful Phases of the Tuberculosis Question C O Probst
5 *The Dust Problem G Homan
6 Basic Factors of Present Day Water Supply Problems H W Hill
7 Artificial Purification of Water Supplies W J Robinson
8 Water Supplies H D Holton
9 General Water Questions T A Starkey

3 **Analogies Between Tuberculosis and Influenza** —The analogies referred to by Gilchrist are the following 1 Both diseases have prevailed in epidemic and endemic forms, 2 tuberculosis and influenza are both respiratory diseases, 3 the respective microörganisms are aërobic and successfully cultivated in general on blood serum and hemoglobin respectively, 4, they display the same tendency in their urinary and respiratory biochemistry 5 both are infectious diseases, neither confers immunity in fact both predispose to subsequent attack, 6, both distinctly affect the functions of relation (a) by exciting rheumatic symptoms, and (b) by giving rise to meningeal and nervous complications Gilchrist closes his paper with the following statement Influenza is a disease of ancestral respiratory function, tuberculosis is a disease affecting these functions in their more recent and actual phylogenetic stage

5 **The Dust Problem.**—As the result of careful observation Homan is convinced that clubs, hotels and similar places, constitute a real seeding ground for tuberculosis among members, guests and employés, chiefly through the inattention or incompetency of those charged with the physical care of the latter and the business management of the institutions The pleurisies, pneumonias, bronchial catarrhs, and cases of tonsillitis and influenza occurring among patrons and among the help of these places find sufficient explanation, according to Homan, in the local conditions, and undoubtedly these ailments prepare the way for the tuberculous infection that easily and commonly follows He is further convinced that the disease is so common in the poorer quarters of the city because many wage earners in clubs, hotels, etc, are drawn from such localities, and medical observation shows that after a time physical deterioration takes place among those employés most exposed to dust The deterioration is usually evidenced by coughs and other manifestations of respiratory disease As measures of prevention Homan advises the total banishment of broom and duster and any other implement or device by which dust is set afloat, and, if carpetings are to be retained, the adoption of mechanical appliances by the use of which no flying matter will be allowed to escape—this, if necessary, to be followed by the wiping of exposed surfaces and furniture with soft cloths The vacuum or pneumatic method of cleaning should be made compulsory by law in every hotel, club office building, theater, church, school and business establishment

The Lancet, London

September 15

10 *Ten Years' Lunacy Treatment in Lewisham Infirmary F S Toogood
11 *Suture of Perforating Wound of the Heart Death on the Eleventh Day F T Travers.
12 Study of the Streptococci Pathogenic for Man (To be continued) F W Andrewes and T J Horder
13 *The Pulse in Aortic Disease Relation of Pulse Curves to Blood Pressure T Lewis.
14 The Rash in Cerebrospinal Meningitis W Wright.
15 *New Method of Administering an Anesthetic Through a Tracheotomy Tube W P Cockle
16 Ankylostomo Parasitism Among the Native Laborers in the Transvaal W G T Posnett
17 Urinary Calculus and Its Detection with the X Rays. E. W H Shenton
18 *Convulsions in Children and Their Relation to Epilepsy R O Moon
19 *Prophylactic Use of Antidiphtheritic Serum W W Shackelton

10 **Ten Years of Lunacy** —Toogood details the work done in the Lewisham Infirmary during the ten years from 1896 to 1905, when 2,033 cases of alleged lunacy were admitted Of these 1,020 patients were discharged either cured or sufficiently recovered for their friends to look after them, 804 were sent to asylums and 209 died Alcohol was directly responsible for 471 cases (23 16 per cent) Of these 403 patients, or 85 5 per cent, recovered, 18, or 3 8 per cent, were sent to asylums, and 50, or 10 6 per cent, died There were 407 cases of delusional insanity Of these 283 patients were sent to asylums, 118 recovered and 6 died Melancholia was responsible for 223 patients, of whom 141 were sent to asylums, 81 recovered and one died (suicide) Of 149 cases of mania, 123 patients were sent to asylums, 21 recovered and 5 died There were 83 cases of general paralysis of the insane Of these 72 patients were transferred to asylums, 5 recovered their mental equilibrium sufficiently to be handed over to their friends, 6 died There were 190 cases of senile dementia, with 29 commitments, 68 recoveries and 93 fatalities Epilepsy with mental derangement supplied 112 cases Thirty two individuals of these were committed, 74 were sent home and 6 died in the condition known as *status epilepticus* Other causes for admission were Idiocy, 75 cases, temper, 10 cases, malingering, 7 cases, cardiac mania, 7 cases, delirium, 19 cases, hysteria, 48 cases, mental derangement, associated with gross brain lesions, 38 cases and puerperal mania, 25 cases

11 **Suture of Perforating Wound of Heart.**—Travers reports

the case of a young man, aged 19 years, who fell and was impaled on a spike fence When taken down one hour afterward, there was found a transverse wound about two inches in length over the lower end of the sternum, through which a vertical fissure in the bone could be seen A rent in the pericardium about two and a half inches in length was exposed, through which blood was slowly escaping The pericardium was full of blood, which was sponged away, a piece of bone one inch by half an inch was removed, and a small spicule of bone was abstracted from the heart A wound (admitting the tips of three fingers) was felt in the right ventricle, where another piece of bone was also felt Its removal was followed by a terrific gush of dark blood The wound in the heart was closed with 20 sutures The patient did fairly well until the eleventh day, when death ensued The cause of death was apparently failure of the heart's action due to the pressure of a clot slowly forming on its anterior surface, which also blocked the pericardial wound and prevented the escape of the blood oozing from the gap in the wound in the heart, and not directly due to a slight secondary hemorrhage The most noticeable features of the case were the plugging of the wound in the heart by the detached fragment of sternum, which almost entirely stopped the bleeding, and the tolerance shown by the heart to the injury and the handling required at the operation Pulsation continued regularly while three fingers were held in the wound with their tips within the cavity of the ventricle The loss of blood was very considerable even then, but the insertion of each suture was observed to act as a very immediate stimulus, and after the insertion of the first row, when the heart's action had become very feeble, the insertion of the second superficial layer of sutures stimulated its action so that it became more regular and forcible

13 **The Pulse in Aortic Disease.**—Lewis reports the results of an analysis of the pulse curves in 20 cases of aortic regurgitation The frequent references made to reproductions of pulse tracings and a very excellent table make it impossible to abstract the article

15 **Administering Anesthetic Through Tracheotomy Tube**—In order to simplify and to make more safe his method of anesthesia, Cockle has devised an instrument which he describes as follows The total length of the instrument is about 15 inches and it is composed of a handle, F G, and a long arm, F E D C B to A. The latter is of flexible metal from D to A and is bent as illustrated A is a one and a half inches square frame, which is to be covered with lint held in position by a safety pin or stitching To use the instrument a piece of lint or similar material is stretched across the square A so as to cover it above and below and held in place by means of a safety pin Chloroform or C E is sprinkled on this from a drop bottle and the part B C is rested on the sternum of the patient, so that A is above the tracheotomy tube The limb C D to E is so bent as to bring the point E well down toward the operating table out of the way of the surgeon, E F gradually sloping up and bringing G to about the level of the patient's ear The length of the instrument enables the anesthetist to stand well back while using it The square A can be raised or lowered over the tracheal opening in two ways—first, as the metal at D is flexible it should be bent up to an angle of about 30 degrees, and secondly, using C B resting on the sternum as a fulcrum by merely raising or lowering the handle F G the distance of A above the tracheotomy tube can be easily adjusted from time to time to whatever extent desired, according as less or more chloroform is to be given

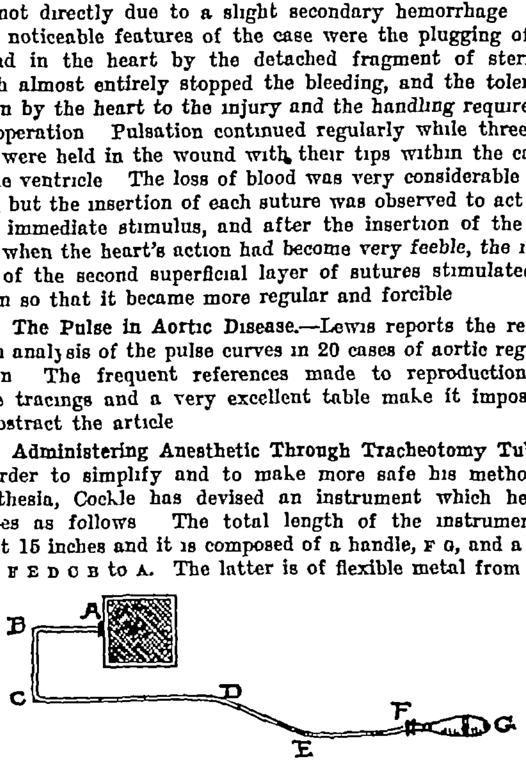

Diagram of Inhaler

In order to replenish the anesthetic it can either be sprinkled on the lint while *in situ* from a drop bottle or the whole instrument can be withdrawn sideways for the purpose without trouble The double lint on the square frame takes a good charge of the anesthetic and being double and sloping downward toward the sternum the liquid does not tend to drop on to the tracheal opening should too much accidentally run out By this method the air way is not encumbered and feathers can be passed into the tube at any time.

18 **Convulsions in Children.**—Moon is of the opinion that convulsions in infancy, associated with reflex causes, have a much more serious prognostic significance than is usually supposed, not only as regards the frequency of the convulsions, but still more as to the probability of future mental and moral deterioration In 200 cases taken haphazard, carefully investigated and followed up, the prognosis as to the future moral and mental condition of the child does not appear to be any better when the first seizure is associated with a reflex cause which can be removed than when it is of idiopathic origin

19 **Prophylactic Use of Antidiphtheria Serum**—Shackleton subscribes to the value of antidiptheria serum used for prophylactic purposes during a school epidemic of diphtheria

The Clinical Journal, London

August 29

20 Pyuria. W P Herringham
21 Deformities of the Arch of the Foot and of the Toes (To be continued) E M Corner
22 *Mechanism of the Therapeutic Action of Nitrite of Amyl F Hare.

22 **Action of Amyl Nitrite**—Hare explains the therapeutic uses of amyl nitrite by its power to dilate the peripheral blood vessels The compensations of the vascular system are such that a lowered blood pressure corresponds to increased rapidity of the heart's action and a slowing of the cardiac action means an increase of the blood pressure by constriction of the blood vessels When the pulse rate is not affected we may assume that a dilatation of the vessels of one region is compensated by a corresponding constriction of the arterioles in another region and vice versa This being the case, it is reasonable to suppose that when a vasodilator affords relief in a certain condition it does so by relaxing vasoconstriction either in the part itself or in other parts by which a local congestion is relieved by the fall of the general blood pressure The beneficial effects of amyl nitrite in menorrhagia and in dysmenorrhea are explained by the disappearance of uterine congestion in consequence of dilatation of peripheral vessels and fall of the blood pressure Hare has found that amyl nitrite administered during menstruation may stop the process. A similar action explains its utility in hemoptysis and other internal hemorrhages in which constricted peripheral vessels and high blood pressure favor the continuance of the bleeding Rigors are accompanied by peripheral vasoconstriction and are frequently relieved by inhalations of amyl nitrite The same is true of angina pectoris in which whatever may be the condition of the cardiac vessels those of the periphery are generally constricted Hare explains the relief of syncope in the same way Hay fever and asthma, he states, are occasioned by local congestions accompanied by general peripheral constriction and the relief of the peripheral spasm brings about a lessening of the local congestion Some neuralgias headaches and epilepsy are affected in a similar manner This explanation of the action of the drug, Hare thinks, will indicate other uses as in angioneurotic edema, impending asphyxia and laryngeal spasm

Presse Médicale, Paris

23 (XIV No 69) Le coup de pression (caisson disease) P Carnot.
24 (No 70) Les nouvelles théories des solutions dans leur rapports avec la médecine S Leduc
25 *Sur l origine intestinale de la pneumonie et d'autres infections phlegmasiques du poumon chez l homme et chez les animaux. A Calmette and others
26 La maladie de Banti. Cailluud

25 **Intestinal Origin of Pneumonia and Other Pulmonary Infections**—Calmette recently announced that tubercle bacilli fed to animals in his experiments passed rapidly through the intestinal wall and were soon found in the lung without leaving a trace of their passage Similar [illegible] ally positive when finely pulverized chare [illegible] particles were fed to the animals ins [illegible]

This research was recently summarized on page 1139 He now publishes another series of tests in which pneumococci were ingested by the animals in the same way, and with the same result, that is, the pneumococci were found accumulated in large numbers in the lungs, with much congestion but no lesions None of the animals sickened It is probable that the animal organism is able to take care of these bacilli unless the vitality is depressed from some cause See editorial in The Journal, October 6, page 1100

Semaine Médicale, Paris

27 (XXVI, No 36) *Les satellites de l alcoolisme C Fernet.

27 **The "Satellites of Alcoholism."**—Fernet uses the term satellite in the second definition given in the dictionaries, namely, an obsequious dependent, ready to do any villainy for the master The satellites of alcohol to which he refers are the intoxications of the same kind which take their place at its side and reinforce, supplement and aggravate its ill deeds The use or abuse of stimulants of all kinds, coffee, tea, condiments, alleged tonics and pharmaceutic "bracers," has become such a habit, he states, that it is growing to be a new scourge whose dangers and their formidable consequences can not be too often proclaimed He reviews the clinical picture of the intoxication due to abuse of essences, coffee and tea, and then that from spices and condiments Korczynski's tests, published in 1901, failed to show that spices and condiments stimulated the gastric secretions Neither the acidity of the gastric juice nor the secretion of the digestive ferments was increased but, on the contrary, the chemical functions of the stomach were decidedly depressed by the action of mustard, pepper, etc. The motor function, however, seemed to be somewhat promoted Tinozzi found that cirrhosis of the liver followed administration of small amounts of pepper to dogs and rabbits for a year Boix has succeeded in inducing experimental sclerosis of the portal type with the aid of acetic acid, butyric acid and pepper Erythema and pruritus have been known to follow the exaggerated use of pepper Neither of these "satellite" intoxications alone would probably prove very serious, but when the effects of several are superposed in the course of the day the matter is liable to be serious, especially in the train of alcoholic intoxication

Archiv f klinische Chirurgie, Berlin.

Last indexed XLVI page 1692.

28 (LXXIX No 3) *Defective Closure of Jaws.—Ueber schiefen Biss in Folge Arthritis eines Unterkieferkopfchens. von Eiselsberg
29 *Osteoplastische Verlängerung des Unterkiefers bei Mikrognathie. G v Auffenberg
30 *Experimentelle Erhöhung der molekulären Concentration des Blutes (to increase concentration of blood) G Ekehorn
31 Ossification of Muscles After Single Trauma.—Ueber Muskelverknocherung nach einmaligem Trauma. F Berndt.
32 *Ueber die chirurgische Behandlung des Magengeschwürs (gastric ulcer) Krönlein
33 *Zur Nieren Chirurgie (of kidneys) I Clairmont
34 *Bedeutung der Phloridzin Methode G Kapsammer
35 *Ueber mein drittes Tausend Kropf Exstirpation (third thousand goiter operations) Kocher
36 *Experimentelle Beiträge zur internen Therapie des Darmverschlusses (intestinal occlusion) Offergeld.
37 Experimentelle Untersuchungen über die Einwirkung der Gastroenterostomie auf das Ulcus ventriculi Fiebig
38 Mein neues Verfahren bei Amputation des Mammakarzinoms I Tansini. See abstract page 902.

28 **Correction of Defective Closure of Jaws.**—Two cases are described in which the lower jaw had been injured by an arthritic process with the result that the teeth did not come together In the first case, the head of the lower jaw was much enlarged and it was resected with complete success Slight facial paresis was noticed for a few days as the only by effect In the second case the jaw was freely movable, but when the teeth were closed the lower jaw swung to one side as if from unilateral dislocation The trouble was due to arthritic enlargement of the condyloid process on one side Treatment was by resection of the part at the neck of the jaw, and the results were apparently entirely satisfactory

29 **Osteoplastic Operation on Lower Jaw for Receding Chin.**—This communication likewise from von Eiselsberg's clinic, describes 3 cases of micrognathia resulting from a bone affection in youth The receding chin was brought out into place by an osteoplastic operation, with results most excellent both from the functional and the cosmetic points of view The operation consisted essentially in sawing the bone apart in the shape of steps, then drawing the parts back to allow the desired space between the horizontal halves of the stumps, and fastening them in this position with silver wire. The details of the intervention are described with illustrations

30 **Effect of Dry Diet in Nephritis**—Ekehorn has been experimenting with a dry diet in cases of nephritis, and he found that while in health the specific gravity of the urine increases in proportion to a decrease in its amount, in nephritis a dry diet lowers the freezing point of the blood The amount of urine was reduced, but the specific gravity did not rise to correspond The kidneys were incapable of secreting a concentrated urine.

32 **Surgical Treatment of Gastric Ulcer**—This address by Krönlein opened the discussion on this subject at the recent German Congress of Surgery He has performed 112 operations on account of gastric ulcer, including 6 supplementary and 5 correcting operations on 101 patients The mortality was 13 8 per cent, and the patients were mostly between the ages of 35 and 49 He asserts that about one fourth of all patients with gastric ulcer, treated by internal measures, have a recurrence of the trouble, and that the mortality is about 10 to 13 per cent The mortality of the latest series of operations on the stomach for ulcer is not more than 8 or 10 per cent The late results are especially fine, a complete cure being accomplished in 61 per cent, essential improvement in 24 per cent, that is, remote successful results in 85 per cent The operation promotes the healing of the ulcer, a dilated stomach returns to normal size in nearly every case, and secretory anomalies gradually become transformed to normal functioning The operation need not aim to remove the ulcer as much as to produce more favorable conditions for its healing and for normal functioning Gastroenterostomy is generally sufficient alone, excision of the ulcer is rarely required except on suspicion of cancer Operative intervention, he believes, is indicated in every case of stenosis of the pylorus, whether slight or pronounced, also in functional motor insufficiency, if internal treatment fails, and also in case of small recurring hemorrhages In case of a fulminating hemorrhage, the risk of delaying until the patient has recuperated from the loss of blood is more dangerous than an immediate operation Gastroenterostomy in this case also is preferable to an attempt to apply direct hemostasis There are no grounds, however, for advocating early surgical intervention in case of a simple ulcer of the stomach Systematic internal treatment should be given a thorough trial first.

33 **Surgery of the Kidneys**—Clairmont analyzes 77 operations performed on the kidneys by von Eiselsberg or under his guidance The mortality was 21 per cent It was found that the freezing point of the urine was not a reliable index unless it failed to vary in several examinations The freezing point of the urine further afforded no aid for an early diagnosis The phloridzin test was found to be more sensitive than cryoscopy In some cases the freezing point of the urine may be found normal, but a slight delay in the elimination of sugar in response to the phloridzin test may point unerringly to functional disturbance in the kidney In case of a gall bladder affection, the right kidney may show delay in eliminating the sugar, consequently this tardy elimination can not serve to differentiate a kidney affection from a tumor in the right hypochondrium Hypernephromata were found most frequently among the tumors of the kidney, and carcinoma was the rarest Pigmentation and freckles were frequently observed in connection with hypernephroma and with this alone Tumors that bleed readily contraindicate catheterization of the ureter on that side The movability of a kidney tumor is an indispensable indication for its operability, although it may also be observed with inoperable growths Resection of the kidney for a hypernephroma, even sharply circumscribed, should not be attempted Transperitoneal nephrectomy does not allow detection of thrombosis of the vena cava nor of extensive infection of the glands Large tumors are best removed through a lumbar incision, opening the peritoneum at the side Lumbar laparotomy is harmless, he states, and facilitates the detachment of the mesocolon In hydronephrosis, nephrotomy is

indicated only when causal treatment is impracticable and nephrectomy contraindicated for any reason Pyonephrosis may be cured by nephrotomy, especially the cases in which a non gonorrheal cystitis is the source of the ascending infection, and it is of recent development In case of persisting fistula, etc, a secondary resection or other secondary operation may lead to a complete cure, avoiding the necessity for nephrectomy Primary nephrectomy is indicated in case of a tuberculous process, and also when pressure on the tumor evacuates thick pus Reflex anuria may be the result of the pains and checking of the secretion in the affected kidney The irritation inducing the anuria is due to changes in the parenchyma which render the kidney more sensitive without materially affecting its functioning

34 **The Phloridzin Kidney Test**—Kapsammer found a constant regularity in the time when the sugar appeared in the urine after the phloridzin test The findings harmonized with a regular law in more than 200 tests in his experience After injection of 0 01 gm phloridzin if sugar appears in the total urine in from 10 to 15 minutes, it may be assumed that one kidney at least is functionally sound He examines the urine for sugar every five minutes A delay of 30 minutes speaks for essential functional disturbance in both kidneys, and if no sugar has appeared in 45 minutes the functional disturbance in both kidneys which this proclaims contraindicates nephrectomy completely In short, he proclaims that the phloridzin test gives findings that can be relied on implicitly It is more conclusive than even the findings with exploratory incision, as both he and Albarran have observed cases of tuberculous processes or new growths in the kidney in which the organ presented an absolutely normal aspect both externally and on exploratory sectional incision The only exception is in case of parenchymatous nephritis When albuminuria and tube casts are found, the early response to the phloridzin test is not synonymous with normal functioning The response is even prompter than in normal conditions Changes in the functional capacity of a kidney are liable to be reflected in the varying response to the phloridzin test This is particularly evident in a kidney injured by toxic action, especially from a diseased mate

35 **Three Thousand Operations for Goiter**—Kocher's last series of a thousand goiter operations has confirmed him in the view that these operations can be regarded as practically harmless, even when the goiter is low and large, and even in elderly persons, if the heart is sound No serious infection of the wound occurred in any case The heart functioning must be carefully tested Even the mere lowering of the blood pressure from the standard 150 mm to 130 renders an operation of the kind somewhat hazardous General anesthesia is avoided if possible, as it renders it more difficult to avoid injury to the recurrent nerve The fact that heart disturbances contraindicate an operation for goiter should induce internists not to let the affection get to this stage before advising operative treatment Still more insistent is Kocher's warning not to produce the "goiter heart" by internal measures in cases in which from the start these offer no prospect of cure He refers to the excessive and too long protracted use of iodids and the abuse of the thyroid preparations, which latter, he thinks, have done much more harm in the treatment of goiter than they have ever done good The "goiter heart" is one of the main features of exophthalmic goiter If we can prevent its development, the prognosis of operative treatment would become much more favorable The simplest means of prevention is by early operation It should not be deferred until a late stage, as only in the earliest stages does it give its best results Surgeons should not be tempted to operate in exophthalmic goiter in case of existing insufficiency of the heart such as is present in the "goiter heart" of advanced exophthalmic goiter Only one possibility need be borne in mind in operating, that of the development of slight hypothyreosis even after partial strumectomy It can be prevented by care that enough functionally capable thyroid tissue is left behind or if the excision has to be extensive, the operation should be followed by thyroid treatment, which here wins its greatest triumphs

36 **Experimental Study of Internal Treatment of Intestinal Occlusion.**—Offergeld's extensive research was directed principally to internal prevention and treatment of postoperative ileus, and to a study of the action of peristaltic drugs on the female genitalia In case of postoperative "strangulation ileus," a second laparotomy, as early as possible, is the only salvation If peritonitis already exists, this complication is decisive for prognosis and therapy All measures that arouse or stimulate the action of the bowels should be strictly avoided in this case, otherwise the process is spread and rupture or perforation may follow Peritoneal adhesions can be reached only by a second operation The only drugs of the slightest use, he states, are those which stimulate peristalsis, eserin, nicotin, barium chlorid, used as prophylactics Mercury is useless in all forms of postoperative ileus Physostigmin, nicotin and strychnin work equally powerfully Nicotin is very toxic. Pilocarpin is less active and it induces copious sweating Barium chlorid is still less active, but it is non toxic. In case of beginning intoxication from any of these drugs, copious saline infusion would eliminate the poison The drugs which induce peristalsis excite the ureters, but do not affect the female genital system

Berliner klinische Wochenschrift.

39 (XLIII No 20) Die Behandlung des Puerperal Fiebers mit Antistreptokokkenserum E Martin.
40 Die Einwirkung des Vierzellenbades auf den Blutdruck (four-cell bath and blood pressure) M Hirsch.
41 Fat and Carbohydrates.—Fett und Kohlenhydrate G Rosenfeld.
42 Zur bakterioskopischen Früh Diagnose der Lungen Tuberkulose (early diagnosis from scrapings of throat) C A Blume.
43 Renal Surgery—Ueber moderne Nierenchirurgie ihre Diagnose und Resultate H Kümmell (Hamburg) Concluded.
44 (No 30) Ueber Agglutination von Bakterien der Typhus Gruppe durch Galle (bile) T A Venema Negative results.
45 *Ueber eine bemerkenswerten Fall von Tumor cerebri H Oppenheim
46 Ueber die Grundlagen und Anwendung der Wright schen Opsonin Theorie (principles and applications) L Weinstein
47 *Diabetes insipidus und seine Behandlung mit Strychnin I Spaether
48 Ueber Syphilis der Caruncula sublingualis J Heller
49 Ueber experimentelle Krebsforschung (cancer research) H Beitzke

45 **Brain Tumor**—Oppenheim's patient was a man with attacks of paresthesia and tingling sensations, starting in the right leg and spreading upward over the entire right side, first noticed a year ago In time these became accompanied or followed by clonic contractions and cramps Later the symptoms appeared first in the arm each time, and finally the seizure involved the whole body, with more or less complete loss of consciousness, postparoxysmal weakness and ultimate paresis There were no signs of compression but there was considerable disturbance of the sense of position ("Lagegefühl"), and there was also astereognosis, that is, inability to recognize objects by handling them, this was pronounced in both right and left hands The diagnosis made on the above findings was confirmed by the operation, which disclosed a tumor as large as a hen's egg, in the cortex projecting into the subcortical tissues about the middle of the posterior central convolution and extending to the adjacent part of the anterior convolution of the upper parietal lobe The tumor was easily enucleated with the fingers, and the patient is convalescing smoothly By the fifth day it was noticed that the astereognosis of the left hand had mostly subsided

47 **Strychnin in Diabetes Insipidus**—Spaether reports a case of diabetes insipidus developing after an injury to the head and favorably influenced by strychnin He suggests that the trauma must have affected the vasomotor centers governing the circulation in the kidney with the diabetes as the result The strychnin had favorably modified the centers in question, and thus indirectly it had benefited the diabetes

Centralblatt f Chirurgie, Leipsic.

Last indexed page 1111

50 (XXXIII No 32) Zur Gallenblasen Exstirpation (cholecystectomy) O Witzel (Bonn)
51 (No 33) Curette for Removal of Gauze Grown in or Held by Tissues—Die Curette zur nachträglichen Entfernung eingewachsener resp eingeklemmter Gazestreifen M Mori
52 Knochenhebel für Osteotomien (lever for bone) G Hohmann (Munich)

amputation of the leg under stovain anesthesia Autopsy revealed nothing abnormal except multiple subpleural ecchymoses Bosse accepts them as characteristic for asphyxia, and attributes the death to direct paralysis of the medullary centers by the chemical poison Dönitz criticises this verdict, as subpleural ecchymoses are observed also in cases of death from heart failure and from fat embolism The long interval before death suggests fat embolism rather than paralysis of the respiratory center from the anesthetic Experiments on animals and 4 cases in which transient paralysis of the respiratory center was observed, all concur in the almost immediate onset of the paralysis after administration of the anesthetic An interval of hours is altogether out of the question. Some of the symptoms observed in the case also suggest fat embolism after the operation on the leg One fatality has occurred at the Bonn clinic in 1,000 applications of spinal anesthesia The patient was a man of 75 with cancer of the penis Owing to the extent of the contemplated operation 2 6 times the standard dose of the anesthetic was injected and in other points the prescribed technic was not adhered to Tropacocain to the amount of 0 13 gm , diluted with 10 c c. of the patient's own cerebrospinal fluid, was injected between the second and third lumbar vertebræ, the patient seated, and he was then laid horizontally The anesthesia spread rapidly up to the neck After a few minutes there was complete arrest of the respiration and pulse. The thorax was found so stiff and rigid that artificial respiration was very difficult, and it proved unable to resuscitate the patient, even after an opening had been made into the trachea The lungs were adherent to the chest wall The anesthetic preferred at the Bonn clinic is 0 04 gm stovain, except when the anesthesia is required at a high level, when 0 05 tropacocain is substituted on account of the danger of respiratory paralysis The patient is then laid flat when the operation is not above the perineum, or the pelvis is at once raised for operations on higher regions A minute or two after the injection the reflexes are tested and the pelvis raised or lowered to correspond, the knee and cremaster reflexes for operations below the groin, the three abdominal reflexes for higher fields It is also determined whether pinching the leg causes as much pain as pinching the neck, for example The anesthesia reaches its maximum in about five minutes

Deetz reports 399 cases in which operations were performed under spinal anesthesia with 0 06 gm stovain in combination with a suprarenal preparation One patient, a much debilitated man of 72 with acute peritonitis, succumbed to arrest the respiration six minutes after the anesthetic had been jected Another patient died of appendicitis five weeks after the anesthesia No inconveniences of any kind were observed in 52 6 per cent of all the patients, but headache followed in 50, very severe in 8, but never lasting more than three or four days, except in one patient who had headache for two weeks, and a man who still has headache after six weeks The communication issues from Müller's clinic at Rostock

Becker relates the similar experiences at Hildesheim with spinal anesthesia in 81 abdominal operations, 20 on the perineum or vicinity and 34 on the legs No by effects were noted in the majority of cases, and headache has become much less frequent since the practice has been adopted of having the patients sit up in bed after the operation to prevent congestion in the head Serious symptoms were observed in 2 cases, in one the patient still complained of headache and pain on movement with occasional vertigo three weeks after the operation She was a consumptive diabetic of 47 requiring an operation on account of suppuration after amputation of the leg

97 **Methylene-Blue-Eosin Stain for Blood and Tissues**—Assmann presents a staining technic which for nearly a year has given most excellent and constant results in his hands, not only in staining dried specimens of blood, pus, sputum, urinary sediments, etc., but also for sections of tissues It seems to be free from the drawbacks of other stains of the kind The dried specimen, without fixation is placed on an object glass and this in turn is placed in a Petri dish About 40 drops of the stain, the methyl alcohol solution of eosin methylene blue, are then poured on the preparation, the fluid being kept on the object glass After three minutes in the stain 20 c c of distilled water is poured over the specimen, after 5 drops of a 1 per thousand solution of potassium carbonate have been mixed with the water and the Petri dish is shaken until the fluid assumes a clear, homogeneous, bright violet color In five minutes after this the specimen is removed and dried without further rinsing For sections of tissues the first step of the process is the same but, instead of the potassium carbonate, 5 drops of a 1 per thousand solution of acetic acid are added to the 20 c.c. of distilled water poured into the Petri dish over the specimen It is left in the fluid for fifteen instead of five minutes, and is then rinsed in alcohol, then in xylol and embedded in neutral Canada balsam The alcohol must be absolutely free from water The details are brought out much more clearly and more evenly than with the May Grünwald or other technics, he asserts

98 **Improved Agglutination Test**—Gaehtgens describes a method with which the agglutination test can be completed in ten minutes The findings were always confirmed by control tests by other technics A test tube containing—as usual—the patient's serum, suspension of bacteria and salt solution, with the serum diluted 1 to 100, is centrifugalized for ten minutes and then shaken up three or four times In the control test-tube some of the bacteria will be found accumulated in a small sediment at the bottom of the tube, the patch being about 2 mm in diameter Shaking the tube breaks up this mass, so that in the hanging drop under the microscope only isolated, freely motile bacteria are visible The same picture is offered in case of negative findings with the patient's serum, but in case it possesses agglutinating properties the bacteria, clumping in flakes, will be found deposited around the central patch of sediment, sometimes dotted around it and sometimes forming a single mass of sediment several times as large as that in the control tubes

99 **Non-Recognition of Mental Affections.**—Dreyfus classifies mental affections as those that may be insidious and never recognized, and those in which the progress of the affection compels its recognition sooner or later He reviews the symptoms of the early phases of various types in each group, remarking in regard to paralysis that at first it is generally taken for neurasthenia, but that differentiation is now easy by means of lumbar puncture. In arteriosclerosis there are only one or two or no lymphocytes to be found in the cerebrospinal fluid, with syphilis there are about 17, but with paralysis from 40 to 50 or even more are discovered in the field This proportion was found practically constant in 132 lumbar punctures made on 102 patients with paralysis Frequently the puncture findings were the only clue to the paralysis The only dubious findings were in case of preceding syphilis or existing meningitis Other symptoms that should suggest paralysis are change in character in middle aged persons, with irritability and temper, slight weakness in judgment and memory and restlessness

103 **Professional Syphilis and Accident Insurance**—The physicians of Germany, under Neisser's lead, are taking concerted action to obtain more consideration in case of professional infection with syphilis The companies in which they have been insured against such contingencies have too frequently managed to escape paying the contracted indemnity Jesionek relates the case of a physician in a small town who contracted syphilis from a scratch during an obstetric operation The company paid the indemnity for the transient sickness consequent on the primary symptoms, but at the close of the year canceled his policy He is still in good health and has shown no signs of tertiary trouble, but he appealed to the courts against the canceling of the policy, stating that the company—in which he had carried insurance for 20 years—should be held responsible for any tertiary trouble that may develop later from the syphilitic infection This the company will not agree to, and it will not reinsure him unless at a higher rate on account of his infection, and only under the agreement that if any other accident occurs to him the indemnity shall not be any higher than if it affected a non syphilitic person All the insurance companies in Germany take this stand and the courts state that the contracts as at present worded and signed by physicians uphold them in these rights

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Original Articles

THE SIMULTANEOUS OCCURRENCE OF TWO NON-RELATED TUMORS IN A MOUSE *

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BOSTON

HISTORY OF THE CASE

The tumors described in the present paper occurred in an old uninoculated mouse kept apart for breeding purposes They were primary in the lung and in the kidney

History—The mouse was an old black, female, purchased April 29 1905 It died Aug 4, 1905 During this time, slightly over three months, it raised two litters of young and was vigorous and apparently in good health up to the last week of its life At this time the two young ones, which were then about three weeks old, appeared small and poorly nourished, but were soon able to care for themselves The mother ate irregularly and became uneasy There was a slight loss of flesh and toward the last the animal s breathing became labored An autopsy was made immediately after death

Autopsy—The superior lobe of the right lung occupies the major portion of the right thorax Within this lobe, and involving the greater portion of it, is a grayish white mass measuring 5x10x10 mm The surface of the mass presenting to the lateral wall of the thorax, has a slightly depressed central portion and an elevated border At both ends and along the anterior edge is a small amount of air containing lung tissue which is also grayish white On section small nodules were found in the lung substance about the mass just described In the surface of the middle lobe of the right lung are two minute nodules only a fraction of a millimeter in diameter The other lobes of the lung were pink and apparently normal with the exception of a minute area of consolidation at the left apex The pleural cavity contains a small amount of fluid but there are no adhesions

The kidneys present a puckered, uneven surface with many clear spots not over a millimeter in diameter, probably retention cysts Scattered throughout the substance of the kidney are opaque whitish or yellowish points In the right kidney near its anterior extremity is a yellowish white nodule one and one-half millimeters in diameter elevating the surface The other organs present no gross lesions

A fresh teased preparation of the mass in the lung examined microscopically showed it to be an epithelial growth One portion of this tumor was fixed in Zenker s fluid and the remainder was placed immediately on ice until preparation was made for its inoculation into other mice

INOCULATION OF OTHER MICE

About two hours after the autopsy, the portion of the lung tumor which had been placed on ice was snipped into small bits and inoculated subcutaneously into five mice Following the inoculation a small mass appeared in each mouse at the site of inoculation This was apparently due to exudation about the material inoculated, and a fortnight later it had entirely disappeared In one mouse, sixteen days after the inoculation, there was a minute subcutaneous nodule which increased slowly in size and appeared as a rounded, slightly elevated translucent mass about 3 mm in diameter Four weeks after its appearance this mass, which was evidently a small cyst, ruptured and practically disappeared but after a few days it began to fill out again After rupturing a second time it finally disappeared about fourteen weeks after the inoculation All five mice were under observation for many months after the inoculation and nothing additional developed The results of these inoculations will be considered in connection with the nature of the primary tumor

THE PRIMARY LUNG TUMOR.

The primary tumor is essentially alveolar in structure (Fig 1) It consists of epithelium which lines spaces made very irregular by projecting folds and processes Some portions of the tumor present an open structure with cavities of considerable size, while other portions present a closer structure, most of the available space being filled by closely packed, irregular folds. This growth may be regarded as a carcinoma The blood vessels of the tumor are empty, but towards the root of the lung are two large dilated vessels, the branches of the pulmonary artery and vein, which are filled with blood Between the lobules of the primary tumor are several dilated bronchi The tumor epithelium consists of cuboidal or columnar cells arranged in a single layer The cells vary in size in different portions of the tumor but are in all cases somewhat larger than the cells of the normal bronchial epithelium The cell outline is distinct and there are no demonstrable cilia In some portions of the tumor the nuclei present a pale hollow appearance, and what chromatin is in evidence is rather evenly distributed In other portions the nuclei, as well as the cells are smaller and more deeply stained Some of the nuclei are deeply fissured, so that they appear irregular Cells are found with two or more nuclei, probably the result of this type of fission Fission may take place in several different places simultaneously, so that the nucleus is divided in four, eight or even a greater number of segments In the study of a great many sections no mitoses have been found

A large proportion of the nuclei of the tumor epithelium present inclusions of a peculiar type They appear as pale, rounded bodies with a definite contour Others are indefinite and are very faintly stained Some appear to be either vacuolated or composed of an aggregation of granules The relation of these inclusions to the nuclear structure is peculiar A continuous membrane surrounds them which is similar in most respects to the nuclear membrane This is either applied directly to the surface of the inclusion or it enc perf clear spherical space with the red st center. The inclusions, although numerous in the tumor epithelium, are not confined to this tissue, but occur also in the connective tissue cells of the stroma and have been observed in many instances in the organs of other mice.

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* Read in the Section on Pathology and Physiology of the American Medical Association at the Fifty-seventh Annual Session June 1906.

The supporting tissue of the tumor proper is small in amount and forms a very delicate structure. The thin plications and septa on which the epithelium grows are composed of both fibrous and elastic tissue. The latter element is present in larger amount in the tumor than in the normal lung. At one portion of the periphery of the tumor its epithelium is found growing along the thickened walls of the alveoli of the lung. The limits of the tumor are not so well defined here as elsewhere. An isolated group of tumor cells is found at one point in the lung tissue growing on the alveolar walls. It is apparent that the tumor extends not only by uniform internal expansion, but also by the growth of epithelium over the surfaces of the alveoli. The interior space of the tumor is filled in places with finely granular material, in places with clear fluid containing a few mononuclear cells. Next to the epithelial surface are found rings similar to those found in the tubules of the kidney. Since the tumor epithelium is found growing on the surfaces of alveoli, it is probable that air has free access at least to certain portions of its substance.

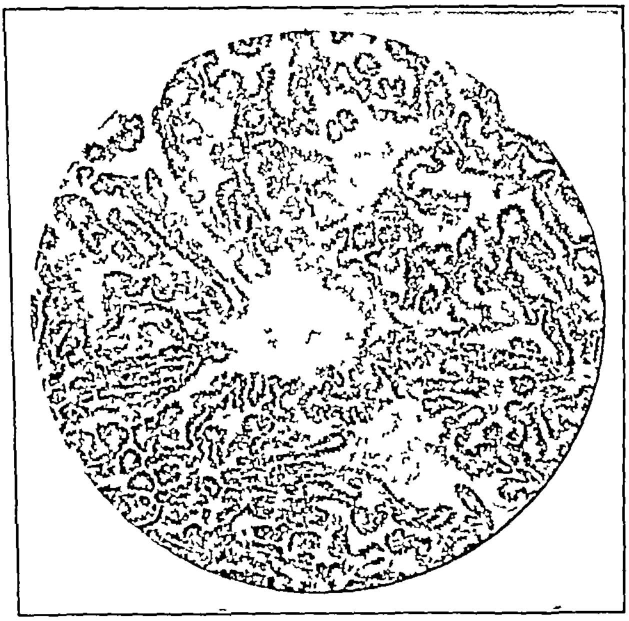

Fig. 1.—Primary carcinoma of lung.

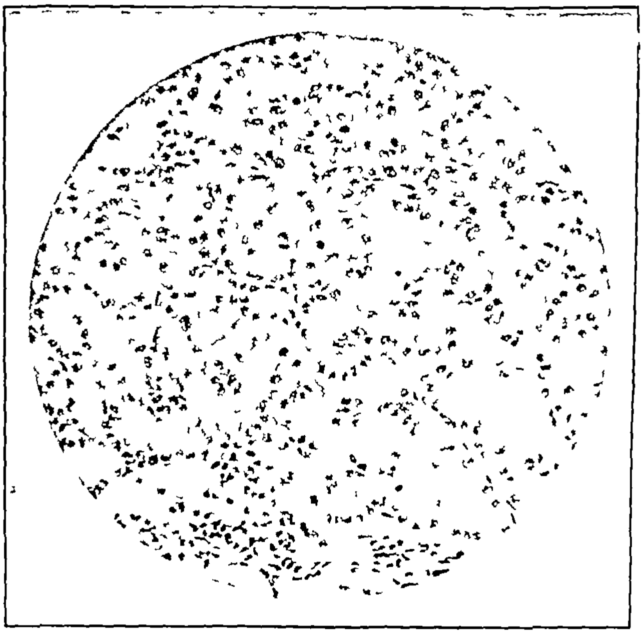

Fig. 2.—Adenoma of kidney.

Within the tumor just beneath the central depression is a mass of connective tissue which apparently replaces an older portion of the tumor. This mass consists, in part, of thick bundles of degenerated connective tissue, in part of loose reticular tissue, in which are large numbers of large connective tissue cells. Special staining brings out a considerable amount of elastic tissue.

The adjoining tumor epithelium presents various retrograde changes. In many places the layer is extremely thin and large surfaces are found denuded of epithelium. Within this mass of connective tissue are large cystic cavities from which the epithelium lining has almost wholly disappeared. The epithelial cells where they persist may be flattened and compressed in clumps or disassociated and irregular. The growth of connective tissue has surrounded groups of epithelial cells and there are many multinucleated cells included within it, which are of epithelial origin. It seems probable this scar-like mass of connective tissue represents on account of its central position, a reaction following a retrograde process in the older portion of the tumor.

The secondary nodules in the lung are similar in character to the primary growth. The reaction about them varies greatly. About one nodule, 2 mm. in diameter the lung tissue presents no change whatever. About other smaller nodules there are collections of mononuclear cells and there is marked increase in connective tissue over a wide area. A small nodule situated near a bronchus represents growth along the route of the blood vessels.

The air spaces of the upper portions of the same lobe of the lung contain many mononuclear cells the origin of which it is difficult to account for, unless they represent alveolar epithelium. In places alveoli are tightly packed with these cells, which vary greatly in size. The larger ones are vacuolated, probably containing fat.[1] There is considerable emphysema in a portion of the lung adjacent to the primary tumor.

THE PRIMARY KIDNEY TUMOR

The nodule observed in the kidney of this mouse is found to consist of irregularly arranged epithelium with staining affinities closely resembling those of the convoluted tubules (Fig. 2). The nodule is sharply defined and distinct from the kidney substance. It extends through the entire thickness of the cortex and bulges slightly from the surface of the kidney. The epithelium

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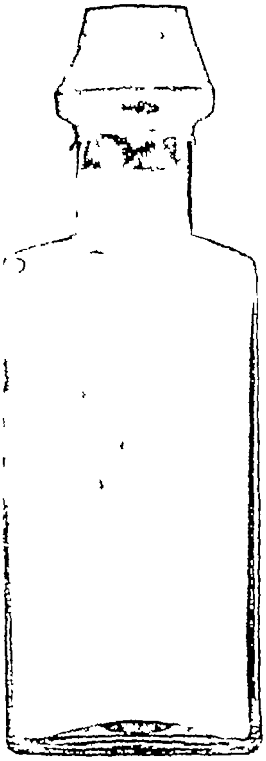
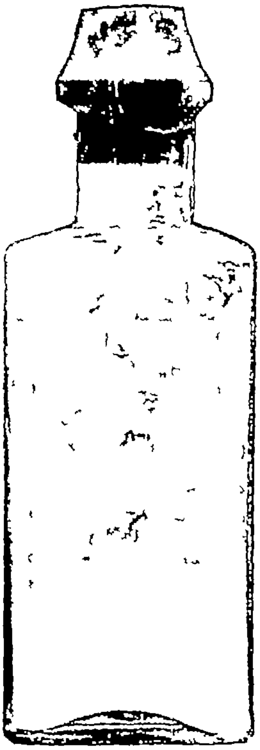
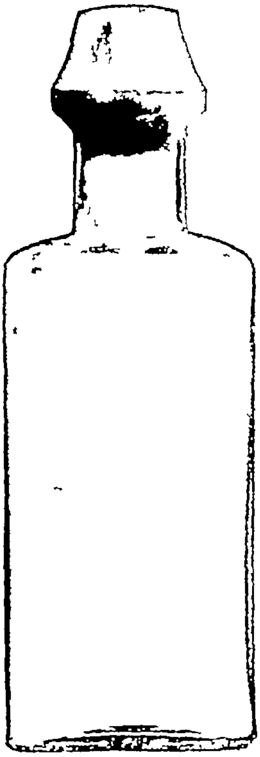
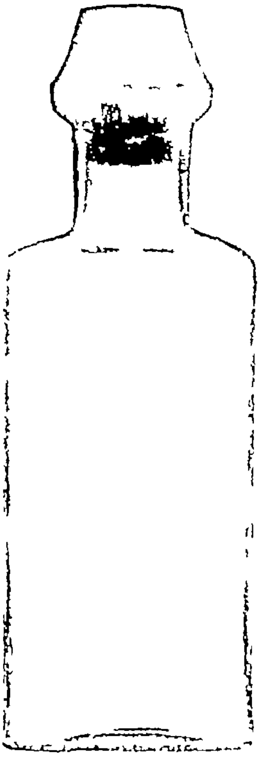
[1] Haaland has described nodules arising from the epithelium lining the alveoli in the lungs of mice inoculated subcutaneously with tumors. The collections of cells found in the lung in this case have a close resemblance to the nodules described by Haaland. It does not appear to me that these collections of cells represent a form of new growth.









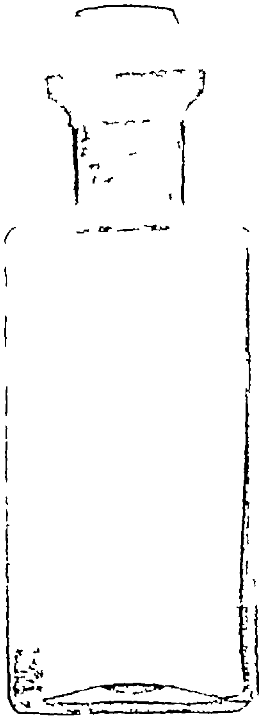
MILK WITH NEUTRAL GASTRIC SOLUTION AND HYDROCHLORIC ACID

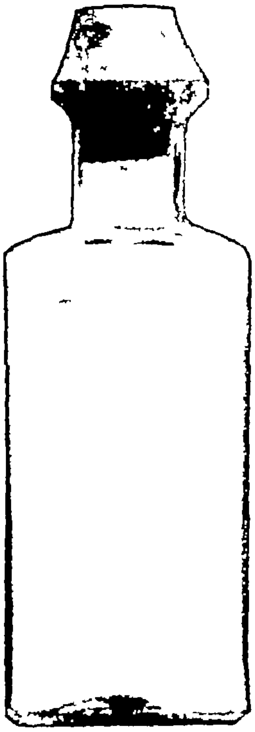
Fig. 1.—HCl 0.1 per cent

Fig. 2.—HCl 0.2 per cent

Fig. 3.—HCl 0.3 per cent

Fig. 4.—HCl 0.4 per cent





MILK WITH SODIUM CITRATE, NEUTRAL GASTRIC SOLUTION AND HCl

Fig. 5.—HCl 0.1 per cent

Fig. 6.—HCl 0.2 per cent

Fig. 7.—HCl 0.3 per cent

Fig. 8 per

Illustrating Article of Mr. England

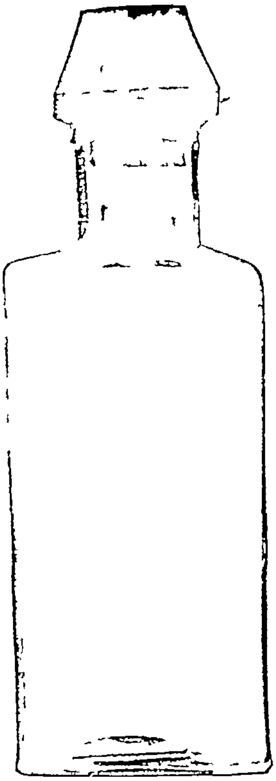


Fig. 9.—HCl 0.1 per cent.

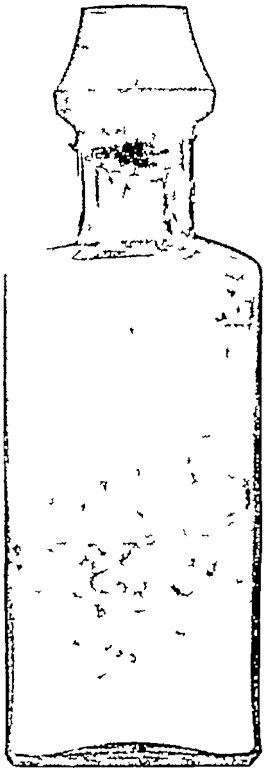


Fig. 10.—HCl 0.2 per cent.

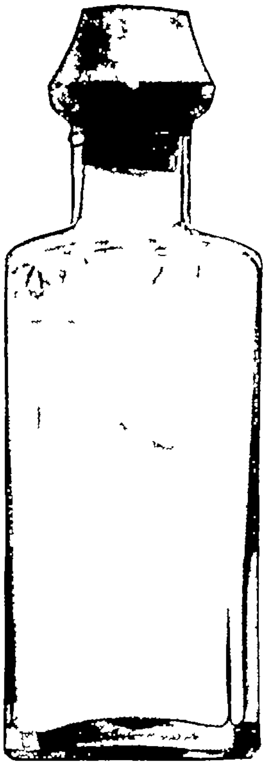


Fig. 11.—HCl 0.3 per cent.

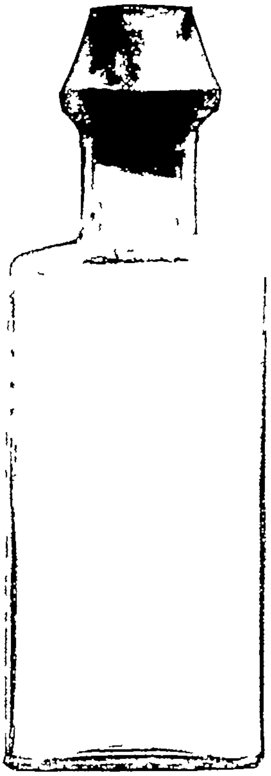


Fig. 12.—HCl 0.4 per cent.

MILK WITH TABLE SALT NEUTRAL GASTRIC SOLUTION AND HCl

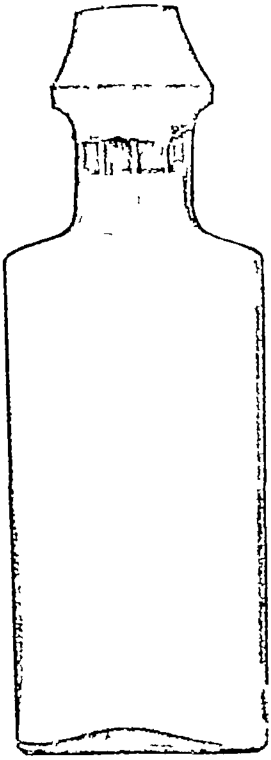


Fig. 13.—HCl 0.1 per cent.

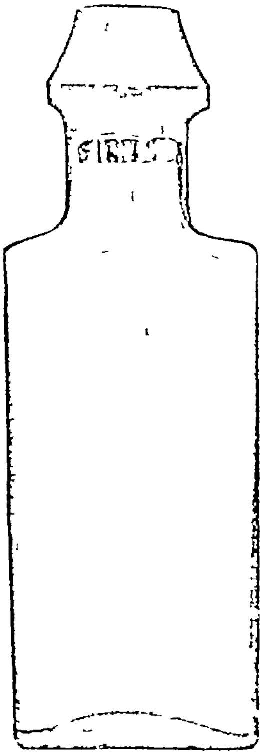


Fig. 14.—HCl 0.2 per cent.

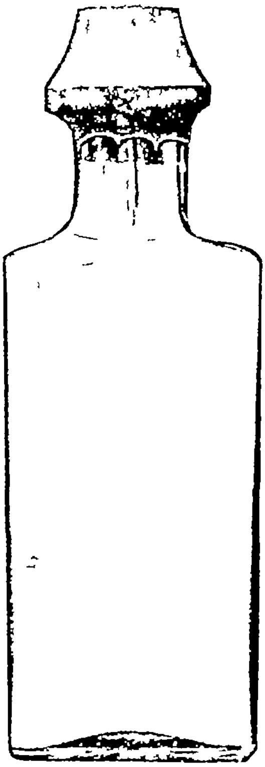


Fig. 15.—HCl 0.3 per cent.

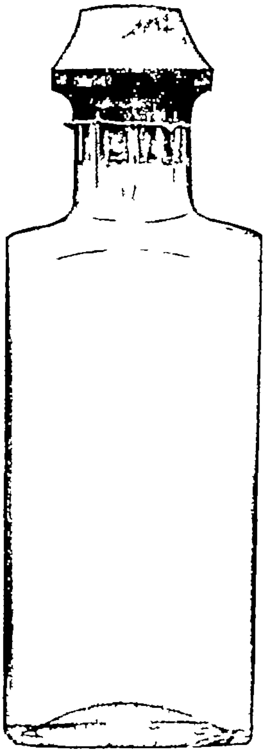


Fig. 16.—HCl 0.4 per cent.

MILK WITH CEREAL DECOCTION NEUTRAL GASTRIC SOLUTION AND HCl

ILLUSTRATING ARTICLE OF MR. ENGLAND

composing the tumor is columnar and in places is apparently ciliated In portions of the nodule the epithelium has a tubular arrangement, while in other portions the growth is very irregular Extending about a portion of the nodule there is a flattended cavity, making it appear probable that the growth has originated from the epithelium lining cyst Near the surface of the nodule is a mass of eosin-staining material consisting chiefly of dead epithelial cells There are several long-pointed crystals in this material

The kidney proper presents marked changes Many of the tubules are dilated with dense, refractive, homogeneous material, in some instances staining with the basic stain, in others appearing yellowish and unstained There are also interstitial changes in the cortex with increase in connective tissue and occasional groups of lymphoid cells The cortex is much thinner than normal and scattered throughout its substance are cysts of various sizes lined with swollen epithelium

FEATURES OF INTEREST

The tumors in this case present several features of interest The fact that no cells were found in mitosis in the tumor of the lung seems rather remarkable and may account for the negative results of the inoculations The appearance of a small cyst at the site of inoculation in one mouse is of little significance on account of its failure to continue growth There is also a possibility that this cyst resulted from the displacement of epithelium in the trauma of the inoculation, but this result has never occurred in a large series of similar inoculations employing the same technic In view of the opaque appearance of the tumor and the lobe in which it grew and the absence of blood microscopically, it seems very probable that the blood supply to this lobe was cut off at a time just prior to the animal's death, perhaps being the direct cause

The nuclear inclusions are not without interest If they present the result of retrograde changes they are important in the analogy which they bear to cancer inclusions in general Their non-specificity is clear in that they occur in other tissues and in other mice without tumors The tumor found in the kidney is of another type and bears no relation to the tumor of the lung

SUMMARY

1 Two non-related primary tumors, an adenocarcinoma of the lung and an adenoma of the kidney, were found in an old uninoculated mouse which had been kept apart for breeding purposes

2 Inoculation of other mice with the tumor of the lung resulted negatively

3 Nuclear inclusions numerous in the tumor of the lung are not regarded as specific, since they are found occasionally in the tissues of other mice

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Pollakiuria in Liver Affections—Wasserthal observed pollakiuria in a case of cirrhosis of the liver The patient had to urinate every twenty minutes, especially at night This caused insomnia Hot baths gave him three or four hours of rest The amount of urine in twenty four hours was 2 000 3,000 c c without any pathologic properties Artificial distension of the bladder with ℥vii of a solution of boracic acid was well borne, and the solution was well retained The pollakiuria in this case was evidently due not to the so-called "irritable bladder," but to some peculiarities of the more or less concentrated urine as well as to an abnormal amount of ammonium and sarcolactic acid —*Vrach Gaz.*, No 16, 1906

THE USE OF SODIUM CITRATE AS A MODIFIER OF COW'S MILK.

FROM A CHEMICAL AND PHYSICAL POINT OF VIEW *

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PHILADELPHIA.

The use of sodium citrate with cow's milk, first recommended by Wright (1893) and later by Poynton (1904), Variot (1904), Vanderslice (1905) and Shaw (1906), has attracted considerable attention, the claim being made that it furnishes an exceedingly valuable method for the treatment of proteid-indigestion and the vomiting of chronic gastric catarrh

It is entirely apart from the purpose of this paper to discuss the therapeutic aspects of the subject, the purpose being only to consider the chemical and physical facts in relation thereto

The chemical ground has been taken by the earlier investigators that the addition of sodium citrate to milk resulted, on contact with the gastric juice, in the decomposition of the calcium-casein of the milk, with the precipitation of insoluble calcium citrate, and the separation of the casein in a more flocculent form than ordinarily obtains But Shaw's experiments have clearly demonstrated that such is not the case He treated milk with sodium citrate solution, filtered the mixture through asbestos filter paper, by means of a suction pump, and dried and ignited the filter, then weighed the residual ash In no instance did he obtain an appreciable amount of ash, and, hence, no precipitation in a chemical sense occurred He believes that some unknown and undetected action or combination takes place between the sodium citrate and the calcium-casein, but advances no theory

What is the nature of this action or combination? Is it a chemical or physical one, or both? Shaw has shown clearly that the calcium-casein combination is not changed in the reaction What other chemical reaction could take place? When sodium citrate solution is brought in contact with hydrochloric acid it would seem very possible that the stronger inorganic acid would displace the weaker organic acid, from the salt used, and form sodium chlorid and free citric acid Such a reaction would be a most logical one, chemically, and, if such is the case, it would follow that the value of sodium citrate, as a milk modifier, is not dependent on the sodium citrate, but on the sodium chlorid and free citric acid formed when the sodium-citrated-milk comes in contact with the gastric juice

That such a decomposition takes place, is indicated by the following chemical reactions When a slightly warmed solution of sodium citrate is acidulated with hydrochloric acid and shaken and then has some freshly precipitated strontium carbonate added to it, a milky white precipitate of strontium citrate immediately forms at the surface of the liquid, and falls to the bottom of the container The reactions are in two stages, as follows

(1) $\text{Na C H O} + 3\text{HCl} = \text{NaCl} + \text{H C H O}$ and then
Sodium citrate Hydrochloric acid Sodium chlorid Citric acid

(2) $2\text{H C H O} + 3\text{SrCO} = \text{Sr}(\text{C H O}) + 3\text{H O} + 3\text{CO}$
Citric acid Strontium carbonate Strontium citrate Water Carbonic acid gas

This precipitation of insoluble strontium citrate formed by the neutralization of insoluble strontium carbonate shows that there is free citric acid in the solution, and not free hydrochloric acid, because if free hydrochloric acid be treated with insoluble strontium carbonate, a clear, transparent solution of soluble strontium chlorid is formed, according to the following reaction

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* Read in the Section on Diseases of Children of the American Medical Association at the Fifty-seventh Annual Session June

$$\underset{\substack{\text{Hydro-}\\ \text{chloric}\\ \text{acid}}}{2\,HCl}+\underset{\substack{\text{Stron}\\ \text{tium}\\ \text{carbon}\\ \text{ate}}}{SrCO_3}=\underset{\substack{\text{Stron}\\ \text{tium}\\ \text{chlo-}\\ \text{rid}}}{SrCl}+\underset{\text{Water}}{H_2O}+\underset{\substack{\text{Carbonic}\\ \text{acid gas}}}{CO}$$

That the milky precipitate formed is not an excess of insoluble strontium carbonate was proved by adding a quantity of strontium carbonate insufficient to neutralize all the free acid, so that the solution remained slightly acid

It may be claimed that there is free hydrochloric acid *in the mixture, and that this is first neutralized by the* strontium carbonate to form soluble strontium chlorid, and that this latter is then precipitated by the sodium citrate. That such is not the case can be very clearly proved by physiologic experimentation, that is, a solution of sodium citrate in water has the cooling taste of the salt which is absolutely not "salty," while the same solution acidulated with hydrochloric acid and warmed to body-temperature for five minutes is unmistakably "salty" in taste

At the meeting of the Section this morning, Dr A C Cotton reported the theory suggested to him by Prof Jerome Salisbury that, possibly, sodium citrate modified milk by decalcifying the calcium-casein, forming sodium-casein and insoluble calcium citrate, and that the latter was dissolved by the sodium-casein This is essentially the view of Poynton except that, in addition, it is held that the calcium citrate is made soluble by sodium-casein, and thus kept in solution

It is a well-known *fact in chemical analysis, and one* that is used to differentiate citrates from tartrates, that the calcium salts, in the presence of soluble citrates, precipitate calcium citrate only when the solution is *boiled* While calcium citrate is practically insoluble in water, it is slightly soluble, though far less soluble in boiling water In addition, if the milk is thus changed, a part or all of its casein should be dissolved, as sodium-casein is water-soluble, and this, apparently, is not the case But, if so, what chemical change takes place when the sodium-casein comes in contact with the hydrochloric acid of the gastric juice? Clearly, the formation of sodium chlorid and insoluble casein

In further demonstration I have made a series of experiments with milk and various reagents, and present a score or more of specimens of different combinations The first four specimens were prepared with milk and varying percentages of hydrochloric acid (0 1, 0 2, 0 3 and 0 4 per cent) In the first specimen, only a part of the casein has been precipitated by the acid, in the second and third specimens the curds were tough and cheesy, as they were also, in the fourth specimen But in this last, and to a slight degree in the third, the curds are more or less broken up by reason of the excess of acid over and above the amount required to precipitate the casein

In the next two specimens the milk was treated with a gastric solution (made by glycerin extraction from the fresh healthy hog's stomach, by Fairchild Brothers and Foster New York) which was slightly acid, and not with a rennet solution as used by Shaw The gastric solution contains both the proteolytic and clotting enzymes, while the rennet solution contains the clotting enzyme only, or chiefly Hence, the former is a better *representative of the actual gastric conditions that obtain on feeding milk*

Pepsin occurs in the gastric juice of both adults and new born infants This condition is peculiar "While in a few herbivora, such as the rabbit, pepsin occurs in the mucous coat before birth, this enzyme is entirely absent at the birth of those carnivora which have thus far been examined, such as the dog and cat."[1]

The fifth specimen was treated with neutral gastric solution, there was a thickening, but little or no curdling, in the sixth specimen, the gastric solution used was slightly acid, and abundant curds were produced which, later, shrunk in size and left clear whey When the milk was treated with a neutral or faintly acid rennet solution, it curdled, more rapidly in the acid condition than in the neutral

The susceptibility of enzymes to changes in environment or physical conditions is remarkable Rennet, as Green[2] states, in his most interesting and instructive work, is active in neutral or in faintly acid or alkaline solutions, but the presence of only a little more than the optimum quantity of either acid or alkali speedily destroys the enzyme at the ordinary temperature Hammarsten found that clotting occurred most rapidly when a faintly acid extract was used, and Ringer has confirmed the observation, care being taken that the acid was added in an insufficient quantity to precipitate the casein The clotting was not due to the action of *the acid on the casein, as the addition of the same* amount of acid without the rennet produced no effect on the milk The study of the actions of acids, alkalies and salts on albuminoids is a most interesting subject, but one that can be considered here only most briefly It *may be of interest to quote the following statement* [3]

> Recent researches have shown that the albumins of the blood have no real acid combining power or alkali combining power, as has been thought In other words, there are no acid albuminates or alkali albuminates in a true chemical sense, such as one would liken to the union of an acid with an alkali Albumins may loosely combine with acids or alkalies in weak solutions without change of properties, but such combinations are apparently more physical than chemical, more intermolecular than interatomic By the action of strong alkali solutions, the albumins are converted (with the elimination of nitrogen as ammonia and sulphur as alkali sulphid) into modifications called alkali albuminates, but these are clearly the products of disrupted molecules, and radically different from the original molecules In a somewhat similar manner these so-called acid albuminates may be obtained with albumins and acids (but without the *elimination of nitrogen or sulphur*), together with albumoses and, sometimes, peptones, the nature of the products varying with the temperature and strength of the acid used
>
> The albumins possess some very interesting physical features The white of an egg (the albumins of which are very closely related to the albumins of blood plasma and its globulins to serum globulins) consists of a frame work of thin membranes enclosing a yellowish albuminous liquid of light density Its viscosity is due to its membranes It is always alkaline in reaction Its albuminous bodies are mixtures of albumins and globulins together with a mucin The albumins *are soluble in water* On diluting white of egg with water, the globulins separate as a glairy mass, and on diluting it with four volumes of water, the mucin is precipitated I have observed that if to 25 gm of the white of an egg sufficient sodium chlorid and water be added to make 100 c c. of a 0 6 per cent solution of NaCl, the globulins and mucin are brought

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[1] Hammarsten Mandel Physiological Chemistry, 1900 p 200

[2] Soluble Ferments 1899 p 238

[3] England, Joseph W The Reactions of Albumin with Acids and Alkalies Am Jour Pharmacy 1903 p 510

immediately into solution, and a transparent solution results This is a remarkable fact, especially if organized material has been made to yield a transparent solution by a change in the physical condition of the solvent If the solution be saturated with sodium chlorid, the globulins are precipitated

The proportion of six parts to the thousand of sodium chlorid in water corresponds in strength with that of physiologic saline solution, and the valuable therapeutic results following the injection of this solution into the body, in certain pathologic conditions, is apparently due to the fact that the saline solution not only dilutes the poisons in the blood by increasing the volume of blood plasma, but makes this increase under normal physical conditions whereby the globulins and mucin are kept in solution, and not under abnormal physical conditions such as obtain with the injection of water alone In health, the amount of sodium chlorid in blood plasma is remarkably uniform (six parts to the thousand) So closely is the rule observed that with food containing an excess of sodium chlorid, the latter is quickly eliminated by the urine, and with food poor in chlorids, the volume of blood first decreases, but increases after taking chlorid from the tissues The secretion of chlorids by the urine is correspondingly diminished

The next four specimens (Figs 1, 2, 3 and 4) were made with milk, neutral gastric solution and varying proportions of free HCl (0 1, 0 2, 0 3 and 0 4 per cent) The curds formed were analogous in appearance to the acid curds, but somewhat gelatinous in consistency Shaw states that the acid curd is chemically different from that produced by rennet The specimens shown in Figures 5, 6, 7 and 8 were made with milk, sodium citrate and gastric solution with varying amounts of free HCl (01, 0 2, 0 3 and 0 4 per cent) The curds were gelatinous and superior in physical appearance to those formed by acids and gastric solution The specimen shown in Figure 5 is barely curdled, that in Figure 6 is strongly curdled, the one shown in Figure 7 is less curdled, the one in Figure 8 is still less curdled and is about equal to that in Figure 5 in appearance Each is distinct and characteristic, both in the amount and kind of curd produced The next four specimens (Figs 9, 10, 11 and 12) were prepared with milk, sodium chlorid and gastric solution, with varying amounts of free HCl 0 1, 0 2, 0 3 and 0 4 per cent), and each is remarkable in its similarity of appearance to the corresponding one made with milk, sodium citrate and gastric solution

In fact, the similarity is so striking that, apart from the chemical evidence submitted, one can hardly resist the conclusions that the physical action of sodium chlorid as a modifier of milk is exactly the same as that of sodium citrate, and that sodium citrate acts as a physical modifier, not as such, but as sodium chlorid by being decomposed by the hydrochloric acid of the gastric juice Whether or not the free citric acid formed has any therapeutic influence is a therapeutic question The percentage of free HCl in healthy nurslings ranges from about 0 1 to 0 2 per cent In adults the percentage is usually calculated to be about 0 2 to 0 3 per cent, "but these figures are not based on pure gastric juice, as Pawlow and his pupils have shown that the gastric juice of the dog contains 5 to 6 parts to the thousand, and that of the cat an average of 5 2 to the thousand of HCl (Rinsantzen) According to Verhaegen's researches, "there is no doubt that pure human gastric juice from perfectly healthy persons has a higher acidity than 2 or 3 parts to the thousand "[1] These experiments indicate that the addition of sodium chlorid to milk has apparently, some physical influence on the proteids of cow's milk whereby they are more rapidly permeated by the peptic ferments and digested, and the presence of sodium chlorid may stimulate also the gastric glands and the outpouring of gastric juice

It is well known that the extractive substances of meat (which contain sodium chlorid), are the most powerful of chemical irritants in producing gastric juice[4] and that rennin may be entirely absent in gastric atrophy and in certain chronic catarrhs

Since, as Shaw points out, sodium citrate as a modifier of milk, is of value only when there is proteid-indigestion and vomiting from gastric catarrh, what is more rational to believe, since the sodium citrate is changed into sodium chlorid by the hydrochloric acid of the gastric juice, than that its action is both physical and chemical

In the use of sodium chlorid as a milk modifier it is essential that only small quantities be employed, as large quantities inhibit the action of rennin (i e, larger quantities than 1 per cent of NaCl), and of pepsin i e, larger quantities than 0 5 per cent of NaCl)

The remaining four specimens (Figs 13, 14, 15 and 16) were mixtures of milk, cereal decoctions, with neutral gastric solution and varying amounts of free hydrochloric acid (0 1, 0 2, 0 3 and 0 4 per cent) Mechanically, the casein in these mixtures is very much better attenuated than with the salines, being uniformly in fine flakes and diffused through the liquid Doubtless, sodium citrate or sodium chlorid can be added to these mixtures, if desired, and used in the conditions indicated

In all the specimens made, the milk (25 c c), etc, was digested on a water-bath at a temperature of 40 C, 0 4 c c or eight drops of the gastric solution being added, and the mixture heated for five minutes[5]

In conclusion I would express the opinion that sodium citrate, which is a neutral salt, has no decomposing action on calcium-casein in the cold, but that it does exert no important physical influence on the casein of milk, that, when the citrated milk is brought in contact with the gastric juice, the sodium citrate is decomposed into sodium chlorid and and that sodium chlorid has important physical, chemical and therapeutic properties in the digestion of the proteids of cow's milk, more important, probably, than has been hitherto believed Whether the free citric acid formed has any more important therapeutic value than the hydrochloric acid of the gastric juice (stimulated in production by the presence of the sodium chlorid) would seem to be very doubtful

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[4] Verhaegen La Cellule 1800 and 1807

[5] The same lot of milk was used for each test and the most striking result of the test was the similarity in appearance of the different specimens of the same acid strength except those made with the cereal decoction that is the curds became progressively finer as were used respectively hydrochloric acid gastric solution and acid sodium citrate gastric solution and acid and sodium chlorid gastric solution and acid With the cereal decoction gastric solution and acid the results were very different in that the curds were uniformly fine irrespective of the acidity and they were less bulky showing the largest degree of peptonization a result doubtless brought about by the extreme fineness of the curd which permitted more ready penetration by the ferments and more rapid action

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Field for Art in Medicine—Béliard of Paris calls attention to the lack of modern attractive pictures dealing with medical subjects and suitable to hang in a physician's anteroom or elsewhere Every one is tired of the classic Rembrandt's Lesson in Anatomy and the like He suggests that here is a promising field for aspiring artists to paint subjects that appeal especially to physicians Rich men would buy the originals while the poorer medical men would be content with reproductions

PUBLICITY AS A FACTOR IN VENEREAL PROPHYLAXIS *

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The association of the idea of publicity with a class of diseases whose distinctive peculiarity is privacy, may seem at first glance somewhat incongruous Venereal diseases are the diseases which above all others are concealed from public observation, both social sentiment and the code of professional ethics have always protected them from exposure. The motive for concealment is emphasized by the element of shame with which they are invested by popular prejudice, from the erroneous idea that they have their exclusive origin in licentious indulgence In the popular conception they are essentially *les maladies rèvelatrices,* affording proof positive or presumptive of immoral relations

Bearing these distinctive traits of shame, secrecy and immorality it is perhaps not surprising that the conventional attitude toward this class of diseases is the very antithesis of all that is implied by publicity The public mind is so imbued with the idea of the essential privacy of venereal disease that any suggestion of sanitary control is resented as an invasion of the private rights of individuals

While it may be true that an individual has the right to use his own body as he pleases, even in the contraction of disease, yet to speak of any infectious disease as private is a contradiction in terms, since every bearer of contagion is a possible source of danger to others If venereal disease were private in the sense of being always limited to the individual who contracts it by voluntary exposure, the case would be different, unfortunately venereal infection from its capacity of expansion, its morbid irradiation through family and social life, its transmission in full virulence to the offspring and its consequent injury to the productivity and vitality of the race, becomes transformed into a social danger of the greatest magnitude and against which society has the right to protect itself by means of every order

VALUE OF PUBLICITY

We may first inquire into the value of publicity in general, and its special adaptation to the prophylaxis of the class of diseases under consideration

Publicity has come to be accepted as a sort of panacea for all social ills Recent developments have demonstrated its remarkable value in the correction of certain public, political and commercial evils, especially those which are based on mystery and secrecy The essential condition of the existence of these evils is the ignorance of the public It has been found that the best remedial measure is to turn on the light of publicity, and the result shows that there is more corrective force in this enlightenment than in any laws which can be enacted

From an examination of these abuses it appears that whatever may be the motives which prompt to concealment the methods by which they are rendered possible are practically the same and their result is to hoodwink the public One or two specific illustrations may be cited The methods by which certain great commercial trusts the oil and beef trusts for example, have been enabled to crush competition and to reap enormous profits, have been through a system of secret rates, of blind billings of rebates through unlawful combinations with the railways and concealed from the public by a deceptive system of bookkeeping and a fraudulent balance sheet

The evils brought to light by the insurance investigating committee were made possible by the methods of false entries, by charging to the general expense account or to some suppositifious fund (as "the yellow-dog fund"), moneys of the policy holders which had been expended for bribery, corruption or campaign purposes That these methods were clearly wrong and entirely indefensible is evident from the fact that simply exposing them, was quite sufficient to secure their prompt and unsparing condemnation by the public, and has covered with disgrace those responsible for these evils

It is to be noted that the men who profited by these secret methods sought to justify them on the grounds that they were conventional and sanctioned by business usage But exposed to the light of day and measured by the strict standard of business probity, they were found to partake of the nature of dishonesty or crime

The same formula of mystery and secrecy is practiced by the "patent-medicine" and proprietary medicine trusts The public is duped by the false branding of goods and by false claims fortified by false certificates of their value Enlightenment of the public as to the actual composition of these nostrums would at once depreciate their commercial value, and that is why the manufacturers so vigorously fight for secrecy

MAGNITUDE OF THE VENEREAL EVIL

We come now to the consideration of an evil which is patriarchal in comparison with these modern evils of mushroom growth Venereal infection furnishes the most conspicuous example in social history of an evil which flourishes in disguise and darkness and which owes its chief potentiality for mischief to the very obscurity to which it has been relegated by traditional prejudice

The venereal evil vastly overshadows these modern evils in magnitude and significance as a social danger The commercial evil affects only a limited class, the venereal peril affects the interests of the race, the one involves chiefly monetary interests, the other involves the health and lives of human creatures, the former threatens business probity and fair dealing, the latter is a menace to the physical and moral welfare of society

Venereal infection stands as the prototype of evils made possible by ignorance of the public and we can not fail to be impressed with the perfect parallelism in methods employed for its concealment with those responsible for commercial evils While the object or end in view is different, the methods are similar and the result identical, so far as the public is concerned

METHODS OF ENTERING THESE CASES IN HOSPITALS

Our system of medical book-keeping, as exhibited in hospital records, health reports and vital statistics, is not free from misleading entries A convenient and somewhat elastic medical nomenclature lends itself to this policy of concealment A vast number of morbid conditions which should be charged to venereal infection are entered under some non-compromising name which does not indicate its real nature Disease directly caused by gonorrhea and in which the gonococcus may be identified as the pathogenetic agent, are entered in our hospital records as purulent ophthalmia, arthritis, endocarditis, endometritis, salpingitis, peritonitis, etc Diseases in which syphilis is the essential etiologic factor are entered as tabes, paresis, paralysis, aneurism, etc These diseases plainly bear the image and superscription of syphilis, but we do not render to Cesar the things that are Cesar's

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* Read in the Section on Hygiene and Sanitary Science of the American Medical Association, at the Fifty seventh Annual Session, June 1906

The enormous debt created by venereal infection and which humanity must pay in suffering disease and death, is charged to the expense account of general disease The balance sheet of venereal morbidity and mortality presented to the public in the annual reports of our hospitals, in the reports of the boards of health and the bureau of vital statistics, the only documents accessible to the people, does not correspond with what physicians know to be the true pathologic balance sheet of venereal infection

The report of the Committee of Seven in New York disclosed the fact that it is not possible to gain from our hospital records or other sources any accurate statistics of the extent of venereal infection in that city This report states "We find records of cases, many thousands altogether, in which the sequelæ of gonorrhea and the systemic manifestations of syphilis are received and treated in hospitals but are entered under names which are not recognized by the laity as indicating a venereal origin "

Thus for example "In one of the eye hospitals there were 136 cases entered as 'purulent ophthalmia,' in all of which the gonococcus had been identified by bacteriologic examination as the pathogenetic factor In the same hospital there were 38 cases of interstitial keratitis, indubitably of syphilitic origin, but not so indicated on the records," etc.

It would be easy to multiply specific examples illustrating this practice, but the fact is well known that the policy of the governing boards of our hospitals is to exclude all mention of venereal disease from their reports

The object is not so much to protect the individual from the odium attaching to a shameful disease as to protect the hospital from the reproach of treating such cases In the out-patient department, for example, the diagnosis of venereal disease is plainly entered as gonorrhea or syphilis, but if the patient is admitted to the hospital the same disease must be entered under some respectable alias which does not betray its venereal origin

In private practice the concealment of every source of venereal contagion takes on the character of a peremptory obligation imposed by the precepts of the professional code In the presence of any other infectious disease, the cardinal consideration is to prevent the infection of others, but in the presence of venereal disease, the higher duty of protecting others from infection falls below the duty of protecting the individual from exposure

It is well known that the health boards, the official representatives of the state, which are charged with the control of all contagious diseases dangerous to the public health, ignore the existence, even, of this class of infections

This exposure of methods by which it is rendered impossible to obtain accurate statistics of venereal morbidity and mortality which might serve for the education of public opinion is not intended as a criticism, still less as a censure of the motives which underlie the practice These motives from the professional point of view are not only defensible, but commendable and claimed to be in the interests of the social order But, irrespective of motive, this policy of concealing a grave peril to the public health is opposed to the first principles of sanitary wisdom Concealment has ever been the most powerful ally of infectious disease

It would be just as insensate to endeavor to prevent gambling when the officers of the law carefully concealed every case coming under observation and the courts ignored its existence in the community

DANGER OF CONCEALMENT

It may be affirmed that there is no factor of danger to the public health which is so utterly ignored, no peril to society which is so systematically covered up and concealed as venereal infection Clearly, publicity, applied to venereal diseases, would mark a revolution in social sentiment, an innovation on traditional custom and an entire change in the spirit and practice of the medical profession

Under these circumstances, is publicity desirable? It may be positively affirmed that publicity is not only desirable but absolutely indispensable to the successful working of any scheme for the prophylaxis of venereal diseases

It is not necessary to violate the time-honored principles of the professional code in enlightening the public, —the medical secret is confined to the individual—it does not extend to the collectivity

The aggregate of venereal diseases and its danger to the individual and to society may be exposed without referring to particular cases Notwithstanding the defective system of recording cases physicians can read between the lines and form an approximate estimate of the extent of venereal infection This pathologic balance sheet should be translated into intelligible terms and spread before the public so that the educational power of the truth may have full force and effect

INDIFFERENCE OF THE PUBLIC AND NECESSITY FOR PUBLICITY

It may be claimed that the public is indifferent, even averse, to this enlightenment Less than ten years ago the public was indifferent to the dangers of tuberculosis, but it was only necessary to correct the ignorance, the cause of this indifference, and public apathy was at once transformed into a lively, active interest The public was indifferent to the insurance and other commercial evils referred to until the advent of that pioneer in the reform of modern abuses who bears the inglorious title of the muck-raker

Now the rôle of muck-raker is considered neither dignified nor desirable, the work of delving in the filth of human weakness and depravity is unsavory, even repulsive, it can be undertaken only from a sense of duty, but the muck is there and needs to be raked It is not confined to the terrain of prostitution where it originates—it spreads beyond the purlieus of vice and invades the habitations of virtue—even the sanctuary of marriage affords no safeguard against its soilure It collects about the very sources of human existence, it pollutes the fountains of life, it befouls the sacred function of maternity, its defilement clings to the innocent infant ushered into the world It is especially needful that the muck of venereal infection should be cleared away from marriage, the breeding place of humanity, so that the springs of heredity may be kept pure and children no longer be deprived of their rightful heritage of vitality, health and vigor

The public should know that the introduction of venereal infection into marriage constitutes its chief social danger and at the same time [illegible] up [illegible] chapter in the martyrdom of [illegible]

If the medical profession [illegible] the knowledge it possesses fections and their terrible consequence to the health and lives of innocent women and children, of the havoc wrought in the home and family, an awakened public sentiment and an aroused public conscience would no longer tolerate such social infamies So long as this foul ulcer in the flank of society is covered up and concealed, it will continue to fester and to send its infection through every part of the social body It must be exposed and laid bare in order to be cured The medical profession should be deterred by no false sentiment or fastidious nicety from engaging in this work of exposure The end not only justifies, but dignifies the means

IS PUBLICITY PRACTICAL

We may now inquire whether publicity is practicable What are the most available ways and means of enlightening the public?

At first glance the indications do not appear reassuring There is a complicity of silence on the part of all the educational agencies of human society in relation to everything pertaining to venereal infection The ordinary channels of communication with the public—the newspaper press, popular literature and other means of general enlightenment—are closed to this knowledge The mention even of these diseases is interdicted by the best forms of good society

Social sentiment holds that it is a greater violation of the proprieties of life publicly to mention venereal disease than privately to contract it But a sentimental objection based on conventional prejudice affords no valid reason for silence on the part of the medical profession Sentiment has no place in the counsels of preventive medicine—when sentiment is opposed to sanitation it must be disregarded Now as to ways and means It is evident that we can not create educational agencies, we must utilize those already existing

First of all, we must recognize that the public can not be reached to any effective extent so long as we discuss these questions, so vital to the interests of society, behind closed doors, they must be brought into the open, *coram publico* John Stuart Mill declared that "the diseases of society can no more be checked or healed than those of the body without publicly speaking of them" Not only must we speak openly, but we must call things by their right names, we must speak plainly but sanely, clearly but cleanly, scientifically but simply There is no need of sensationalism, the plain unvarnished truth is sufficiently sensational, without embellishment or exaggeration This plain speaking should be devoid of any quality of offensiveness, it should be tempered by tact, discretion and a sense of the fitness of things

SPECIFIC METHODS OF PUBLICITY

Time will permit only the briefest reference to specific methods of publicity Since the newspaper press, the most powerful of all agencies of publicity, is not available, at least for the present, we must have recourse to other agencies of popular enlightenment—pamphlets, tracts, conferences, lectures, etc Meetings organized by medical societies for the free discussion of these subjects and to which the public is invited constitute a most valuable means of propagandism

Another valuable agency in this educational campaign would be the establishment of a journal of popular medicine, devoted to the study and prevention of all communicable diseases especially those spread in the ordinary relations of social life A knowledge of the source, the means of dissemination, the modes of contagion and the measures to be taken to prevent the spread of these diseases, should be given in simple language, intelligible to laymen In such a publication the study and prevention of venereal infection would enter naturally as one of the most important of the group of communicable diseases Such a journal has already been projected and under auspices which, it is hoped, will insure success

The brief experience of the American Society of Sanitary and Moral Prophylaxis in this educational work has shown that thousands of serious-minded members of the laity are already thoroughly aroused to the importance of this work The opportunity seems to be propitious for inaugurating a general campaign of education, the public mind is receptive and ready to assimilate this knowledge We should take advantage of the current of social reform which is now sweeping the country and which sets so strongly in the direction of publicity in all matters affecting the interests of the public

66 West Fortieth Street

THE DUTY OF THE MEDICAL PROFESSION TO THE PUBLIC IN THE MATTER OF VENEREAL DISEASES, AND HOW TO DISCHARGE IT *

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Ignorance is the condition which alone makes slavery and oppression possible

This applies to the tyranny of disease quite as much as to the unjust dominion of man over man Nothing should stand in the way of emancipating mankind from the tyranny of disease and especially of those diseases that are most destructive and wide-reaching in their effects

Physicians alone know the truth as to the widespread ravages of venereal diseases and on them rests primarily the duty of disseminating that truth so effectually that the way of escape from their dire effects may be made plain, and adequate safeguards for the protection of the innocent may be created.

WHERE AND HOW SHOULD THIS TRUTH BE MADE KNOWN?

So self-evident are the three leading propositions that head this paper that they need no discussion The consensus of medical opinion the world over declares that the time is at hand for adopting such measures as will be most effective in arresting the hideous ravages of syphilis and gonorrhea In order to accomplish this we must go to the root of the matter and, throwing aside all false barriers of prudishness, mock modesty and misguided sentiment, build up rational and enduring defenses such as a right and sufficient knowledge of the nature of these diseases and the modes of their propagation alone affords It is most assuredly imperative, if this knowledge is to be placed where it will do the most good, that it be given to those who are in the greatest danger from such diseases, and in time to serve as a preventive

The members of the medical profession throughout the civilized world have at length awakened to a sense of their duty as guardians of the physical welfare of mankind in its broader sense, not only in respect to the cure of disease, but also as to the prevention of it

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* Read in the Section on Hygiene and Sanitary Science of the American Medical Association, at the Fifty seventh Annual Session June 1906

The futility of attempts to check the ravages of many diseases by confining effort solely to the individual victim of them, the physician has discovered and made so apparent to all that society claims and exercises the right to regulate the conduct of its members in so far as public sanitation and private sanitation may require it This principle is now so well established that the pathway for its application, in any direction, needs but to be made plain and society will follow it, no matter what the obstacles Long-established custom, prejudice, sentiment, all will go down before the more fundamental right of self-protection from real and grave danger

In initiating a propaganda, therefore, against the ravages of venereal diseases the medical profession is but discharging its proper duty and showing itself worthy of its high mission That mission in this instance is to disclose the pathways of invasion of these formidable enemies of man and to make plain the ravages they commit, leaving it to the parent, the teacher, the pastor and the legislator to devise the proper means for protection and defense

But in order to carry on the campaign effectually there must be no dissension in the ranks of those who enlist to fight its battles All should be agreed as to the fundamental truths which they are seeking to establish, otherwise the warfare will be a half-hearted one

Since it has fallen to the medical profession to take the initiative in enlightening the public regarding the dangers that surround and threaten them from the prevalence of these diseases, the information furnished should be as accurate as possible All statements from medical sources made with a view of stimulating the public to action should receive critical supervision and go forth stamped with recognized authority

MISCONCEPTIONS AND FALLACIES

At the very foundation of this proposed structure lie certain quicksands which must be removed before we can build securely

These consist of certain misconceptions or fallacies which have a strong hold on a large number of minds, both medical and lay, and which until they are removed will exercise a retarding if not a reactionary influence on the best endeavors put forth to create enduring barriers against these evils

The first of these fallacies is the medical or physiologic one that continence in sexual life is in any way injurious to him or her who practices it.

The second is the social one that permits one standard of recognition for the man and another for the woman who has fallen from virtue

And the third is a fallacy of method, built on a misconception of the factors entering into the problem, and consists in a prevalent belief that a breach of moral law with its evil effects both moral and physical can be repaired by any system of legal restraint or license directed to the physical effects alone, especially since such legal control must of necessity be both partial and incomplete

It is scarcely to be expected that much will be accomplished for this new movement by any whose minds are clouded by one or other of these misconceptions

Such beliefs are not consistent with high ideals of manhood and womanhood, and only those imbued with such ideals can be relied on voluntarily to sacrifice personal comfort and convenience and to initiate a contest against the most formidable forces for evil that man has yet encountered

METHODS OF DISSEMINATING KNOWLEDGE

It must be a most gratifying and hopeful sign to those who hold dear the honorable traditions of the medical profession and expect for it a larger measure of usefulness to humanity in the future to see its leading members everywhere giving voice, influence and personal effort to check the remote causes of disease, being prompt to enter into association and to adopt the most effective measures to attain this purpose

The more thorough the organization the sooner will we reap beneficial results, and the present machinery of the American Medical Association affords an excellent vehicle for prompt and efficient action in getting the needed knowledge to the public, of all ranks and conditions of life, in the most effective ways First, as has been proposed, there should be a standing committee of the American Medical Association as a central nucleus charged with the duty of collecting statistics, gathering and disseminating campaign literature, keeping in affiliation and co-operation with foreign organizations of similar purport, suggesting and aiding in securing needed legislation

Each state medical society should have its standing committee charged with corresponding duties, and so on to the county societies

Through these county organizations, or the councilor district organizations representing them, the medical profession the country over with great force and effectiveness can bring the gathered information directly to the knowledge of the people through the medium of public meetings judiciously arranged

It will soon be discovered by the committees chosen to do this work what persons are the best fitted to present tactfully and effectively to the lay mind the truths that we need to impart. And the leaders in philanthropic movements in each community can be entrusted with the duty of devising the plans for disseminating this knowledge best suited to their local conditions

Thus a host of capable workers will soon arise in each state, and in every councilor district of the state, who can be called on to lend their aid as circumstances require their services

There are many suitable channels already at hand for the distribution to the public of the facts they need to know concerning these diseases

It is the proper function of our state and municipal boards of health and local health officers to disseminate such information, and while there has been a hesitancy on the part of these officials to initiate a campaign of instruction on a subject which respectable people have hitherto dared mention only with bated breath, with the sanction and backing of the medical profession these officers can be counted on to assume the duty

By this means circulars of information and instruction can be distributed and state laws and municipal ordinances, designed to limit the spread of such diseases and to check their evil effects, can be kept constantly before the public mind so as to insure their enforcement The medical inspection of schools and of school children, with the precaution it creates against the spread of contagion of these and other diseases and the enlightenment it gives to parents and teachers as to the nature of these diseases among others, is another most effective channel of instruction

The city physician and sanitary inspector when well chosen, are in a position to aid greatly in the work by bringing such sources of contagion to the knowledge of those whose duty it is to enforce the law and ordinances designed to suppress them

Members of boards of education, superintendents, principals and teachers of schools, both public and private, should all be well informed as to the nature of these diseases and the dangers which attend them and their interest and co-operation secured in efforts to check their ravages

Effective work can be done through church organizations, young peoples' Christian endeavor societies and mothers' meetings

The young men's and young women's Christian associations are admirable channels for the spread of such knowledge, and the possibilities which the Salvation Army has for reaching these sources of evil directly and effectively must not be overlooked.

In manufacturing, commercial and industrial cities where large numbers of men and women are employed, both young and middle-aged, the interest of employers can usually be enlisted to afford an opportunity for such instruction to be given when it is not possible for these people to be reached through other channels

In all of this work the physician who knows the facts and can speak from experience must take the lead, and it is in work such as this that the woman physician, of the right sort, will find a sphere of activity and great service peculiarly her own, for separate instruction to the sexes, both young and old, will need to be given plainly, but tactfully, and by those who have seen at close range the dangers they portray and whose word carries conviction because spoken with authority Broad, disinterested benevolence, such as rightly represents and adds dignity to a liberal profession, should characterize the persons chosen for this work It is not for the self-seeker nor the unsympathetic, but for those who know what it means to labor for the unperishable riches, and of these workers the medical profession has an abundant share

In the brief sketch here given I have but presented in outline the plan of campaign already adopted in the state of Michigan The State Medical Society of that state created, a year ago, a standing committee charged with the duty of bringing to the knowledge of the public the facts that need to be generally known, and referring to the origin, spread and dangers of venereal diseases This committee was authorized to enlarge its number to twenty, many of whom are chosen from the laity One most successful meeting has already been held in Detroit, at which it was fully demonstrated that the most influential citizens are quick to respond and follow the lead of the physicians in this work From this committee of twenty, subcommittees on publication, education and legal enactment have been organized and are at work On these committees are physicians, lawyers, ministers of several denominations, business men and women devoted to philanthropic and charitable undertakings There is no question but that which we have demonstrated, through the work of this organization in Michigan, serves but to indicate the general temper throughout America on this most important matter, and it needs no prophet to foresee how fruitful of good results such a systematic and thorough plan of enlightenment against this grave evil will soon be able to accomplish

THE DUTY OF THE STATE TOWARD VENEREAL DISEASES *

HENRY D HOLTON, A.M., M.D
BRATTLEBORO, VT

In discussing the duty of the state in relation to both syphilis and gonorrhea, we must recognize that, under the present status of public opinion, the state can accomplish very little, either by the enactment of new laws or by giving additional authority to boards of health, that before we seek aid from the state there must be created a public sentiment which will sustain action by authority, but there must also be a strong demand for state interference

This can only be brought about by an educational movement, which shall begin in the home and continue in the high and preparatory schools and college

The parents should explain how the race is perpetuated, the sacredness and responsibility of the relations of parents and children, the great moral and physical dangers that attend on the abuse of those functions, and that continence is not incompatible with health The teacher or physician should enlarge on these lines and point out the diseases that result from impure intercourse, that all clandestine embraces are dangerous, as the individual, male or female, who enters into such relations, be it clandestine or otherwise, will sooner or later become infected, and either of the diseases thus acquired are of the most serious character, of long duration, often followed by the most disastrous results, ending in death or chronic invalidism, and many times by deformity It is quite possible that the profession should first be educated along the line of duty Physicians are familiar with the loathsome and disastrous nature of venereal disease, of the danger of its communication to innocent persons, in fact, of the great menace it is to our civilization Yet in the past we fear that it has been regarded too lightly by some, others have turned away such cases with disgust In both cases, the great duty of attempting to stay its destruction and progress has not been recognized or at least acted on.

In countries across the sea statistics have been gathered, showing the prevalence, how provided for, and the means used to prevent its spread In a certain way, these are of value to us, yet the difference of our form of government and social conditions is such as seriously to impair their usefulness when we attempt to draw deductions or to formulate regulations for their control

The information necessary to carry on successfully the work of prevention should be the first work of any organization that has in view the control of these diseases

Without going into details it will be recalled that in a joint meeting of this section and that on cutaneous medicine, in 1904, a committee reported on this subject, recommending the sending to every physician a request for certain statistical information, which it was hoped might be useful in the further consideration of this subject

These communications received the approval of the state and provincial boards of health, and they are here inserted

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* Read in the Section on Hygiene and Sanitary Science of the American Medical Association at the Fifty seventh Annual Session, June 1906

VERMONT STATE BOARD OF HEALTH

OFFICE OF THE SECRETARY, BRATTLEBORO

Dear Doctor —The enclosed leaflet is issued in the interest of prevention of venereal diseases It is for you to give each patient who consults you suffering from either gonorrhea or syphilis It has been prepared so as to be concise and in language to be understood by everyone This we hope will cause it to be read by those to whom it is handed. It will introduce the subject of prevention thus enabling you to give your patient further information of the extent of this scourge Additional copies of this leaflet can be had on request.

It is estimated that 80 per cent. of all deaths from pelvic diseases in women are due to gonorrhea Twenty per cent. of all blindness is due to gonorrheal infection of the newborn Fifty per cent. of all involuntary childless marriages are caused by gonorrhea of the female organs of generation, of which 45 per cent. are due to marital infection by men In this country it is impossible to quote statistics as they never have been gathered. The committee of fifteen estimated that there were annually 200 000 cases in New York City alone In Prussia, where they have more reliable data it has been stated that typhoid fever represents a yearly loss of 8 000 000 marks, while the increased expenses and decreased income caused by venereal diseases amount to 90 000 000 marks annually an amount which exceeds that caused by tuberculosis But the financial loss is of minor importance compared with the enormous social changes and consequent social misery

In view of these startling facts, which indicate the increasing danger to our people, will you not, my dear doctor aid your state board of health in gaining reliable statistics relative to these diseases by returning to the secretary each year the following blank with every question answered?

Cases of gonorrhea observed during the year 190 Male
Female Married Single Number having children
Number without children

Cases of syphilis Male Female Married Single
Number having children Number without children

CIRCULAR OF INFORMATION ADOPTED BY THE CONFERENCE OF STATE AND PROVINCIAL BOARDS OF HEALTH OF NORTH AMERICA.

Issued by the State Board of Health of Vermont

We hand you this leaflet believing that you would not willingly communicate your disease to some innocent person

Many fail to comprehend the exceedingly disastrous results that often follow these diseases. Many cases of blindness complete disability and not infrequently death results from them Gonorrhea is one of the most frequent causes of diseases peculiar to women So serious a menace have these diseases become to the public health that the medical profession and sanitarians in all countries have become alarmed, and are advocating measures for their prevention.

Syphilis (or pox) is especially a disease from which innocent persons may suffer as it usually produces sores in the mouth or on the lips, hence may be conveyed by kissing drinking from the same cup, or using anything which has been put to the lips or into the mouth of one affected by the disease

These diseases are often communicated when the patient thinks he has recovered. Hence marriages contracted at this time of the disease result in much unhappiness and often in the death of the wife. To protect yourself and others, we earnestly advise the following

IN THE INTEREST OF PREVENTION OF YOUR DISEASE.

What to do and what not to do to get well and to prevent giving your disease to any other person

Follow strictly the advice of your doctor use no other treatment.

Remember that it takes a long time to entirely recover

Carefully wash your hands with soap and hot water whenever you handle the private parts.

Do not have intercourse and avoid all sexual excitement until your physician says you are completely cured. Be especially careful not to rub your eyes with your fingers.

Do not allow any person to use any cup glass, spoon, fork or anything that you have put in your mouth.

Do not kiss anyone or wipe the face of a child with a handkerchief you have used Always use a separate towel Burn all cloths or cotton soiled by discharges.

It was then considered desirable to send the circular of information to the principals of preparatory schools and to the presidents of all colleges, with a request that they call the attention of their medical officer to the subject, to the end that it should be presented to the students in their respective institutions The committee not having funds to defray the expenses of printing and postage, applied to the trustees of this Association, asking that the printing office of the Association aid them, but were refused this assistance. So far as we are informed, these circulars have only been sent out in Ohio, Florida, Minnesota and Vermont

If all cases were reported to boards of health as other communicable diseases are (without names), so that we could arrive at a fairly accurate estimate of the whole number of cases occurring, the number of each the manner acquired—whether innocently or otherwise—and the effects on procreation, we should have a foundation on which to base recommendations for prevention A more accurate recognition and division of the manner of communication, whether from the ordinary courtesan, clandestine embrace, or from entirely innocent sources is also of importance

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THE WAR AGAINST THE VENEREAL DISEASES IN FRANCE *

THEODORE TUFFIER, M.D

Professor Agrégé of the Faculty of Medicine of Paris, Surgeon to the Hospital Beaujon
PARIS, FRANCE

The question of venereal prophylaxis is the order of the day in our country, from all sides medical men, statesmen and even literary men are combining their efforts to contend against this scourge New measures are being studied and our *Societe de Prophylaxie,* composed of internalists, surgeons, obstetricians, the most eminent members of the school of law and the principal police officials, meets once a month to consider important matters relative to the subject. This society has been productive of definite results

The system in use in France is composed of two separate branches—absolutely different—that is, the police and the medical service Government surveillance is exercised in reference to houses of prostitution as well as to the so-called free prostitutes who are registered at police headquarters The inmates of all houses are examined once a week, the others are obliged to report to the examiner once in two weeks A card is given them which shows the absence of every venereal symptom at this visit, and is in effect an authorization to continue their calling There is also clandestine prostitution, the object of special consideration by the police, which constitutes, strange to say, a third of all diseased women When arrested, these women are kept in a special hospital—Saint Lazar—until cured

This system which has been in existence for numerous years is now violently attacked It is said that an examination made so infrequently is necessarily illusory as regards any benefit. It is claimed that prostitution should be free The dictum has gone forth "A free woman on a free sidewalk" The abolitionists in France are represented chiefly by an extraparliamentary constituency Everybody believes that the system should be modified, and various modifications are being studied

ACTIVE FORCES IN THIS WORK

Among the most active forces in the study of this prophylaxis and the practical methods best adapted for its realization must be mentioned the collaboration of Professor Fournier, the world-renowned syphilographer, and Mr Brieux a dramatic writer of great talent They have already done much for the cause, one by his authoritative writings and the other by his theatrical representations, of which "Les Avaries" has achieved a universal recognition Their program is this To tell everybody regarding the existence and the danger of syphilis and to increase the facilities for treatment The education of the people regarding venereal matters is effected by an active propaganda A series of conferences is established wherever men are grouped together In the army and navy this is done officially by the medical officers In great industrial centers which are the hot-beds of syphilitic propagation instruction is given and thousands of pamphlets are distributed For example, "The League Against Syphilis," "The Social Danger of Syphilis,' "For Our Sons When Eighteen Years Old," etc, are short articles of some thirty pages, capable of being read and understood by all who are ignorant of medical terms More than 20,000 copies of these pamphlets have been distributed

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* Translated by Denslow Lewis, M.D. Chicago

* Read in the Section on Hygiene and Sanitary Science of the American Medical Association at the Fifty-seventh Annual Session, June 1906

A propaganda of this kind is the only means of reaching the man in France, because here no ordinance, no law can affect one who is tainted (avarié) The soldiers and sailors alone are subject to military regulations and can be placed in a position where they can do no harm until they are free from disease Unfortunately, the fear of this enforced sequestration causes much dissimulation by all kinds of methods and favors a continuance of infection for a protracted period before the men are finally interned.

It is the woman alone and chiefly that reglementation can affect, but reglementation in her case must, above all things, be humane and legal If it is impossible to arrest a woman known to be syphilitic, unless she solicits, it is in our power to limit the deplorable effects of her calling by decreeing that no woman shall publicly solicit patronage unless she can show a certificate of health signed by some physician Unquestionably there is wide latitude in this statement, "some physician," but the responsibility attested by a signature under these conditions is such that we do not believe it is ever given without a full knowledge of the facts

The propaganda against syphilis, the partial reglementation, these are the first two elements of the new program The third consists in the increased facilities for treatment, and in this connection there has been considerable discussion as to the advisability of increased venereal therapeutics in special hospitals or in a special service in all general hospitals The first fact of importance, on which all are agreed, is the recognition of the necessity of more frequent examinations Fournier and Brieux have insisted on an examination night and morning every day, including holidays Practical experiments at Saint Lazar and the Hopital du Midi have shown good results The evening examination, which is for the benefit of those employed during the day, that is, the great majority, results often in the discovery of an increased number of diseased women who are at once removed from the possibility of pursuing their calling, and thus diminish the chance of contamination A second fact, very generally acknowledged, is that all physicians who make these examinations must be venereal specialists Such practitioners alone bring to each examination a personal interest which ensures an adequate, competent and necessary understanding of each individual case

EXAMINING STATIONS

As regards the location of examining stations, most medical men believe that in connection with all special and general hospitals there should be a dispensary—a special service—devoted exclusively to the venereal diseases

Such is the new plan, proposed, discussed, elaborated and still the subject of study, which represents in France the result of our efforts against venereal infection It is only a project, but by its simplicity and its logic it seems destined to rally to its support all of our voters and to secure the approbation of our government "The right of the question is one of social protection and interest '

WHAT SHALL WE TEACH THE PUBLIC REGARDING VENEREAL DISEASES?*

ALBERT E CARRIER, M.D
DETROIT

It seems to me that the answer to this question should be that required of a witness in a court of law, viz, to tell the truth, to tell the whole truth and nothing but the truth

It has been our custom in the past to tell a part of the truth only in regard to venereal infections, to apologize for not telling the whole truth, and to cover what we did tell with a coloring that has robbed these affections of their appalling nature An ounce of prevention is worth a pound of cure, and our profession is evidencing this in its efforts for better sanitary methods, better hygiene, the isolation of contagious diseases, and in educating the masses how to avoid contraction of these affections

The object sought by these efforts is the reduction of the death rate The enormous sums of money spent to reduce the death rate, one in a million, is considered well expended, while the labor involved and the sacrifice of health and even life are regarded as necessities Were sanitary and hygienic methods directed solely to the prevention of morbidity, venereal disease would stand first in demanding attention, but to-day there are thousands of centers of infection against which the public has no protection, no measures have been instituted whereby the masses might be instructed in ways to avoid the contagion of venereal diseases, nor that these affections may be contracted innocently, more than this, these centers are ambulatory, traveling from place to place In outlining any plan of instruction, conditions must be appreciated in order that our efforts may be along lines of least resistance

The public is made up of individuals of both sexes, of all ages, of all nationalities, of all religions or none, of the educated and the ignorant, of the affluent and the poverty stricken, of the virtuous and the vicious Different peoples have different viewpoints of chastity, of purity and morals in general, and our methods of teaching the truth will require modifications to meet these different conditions Illicit intercourse is wrong, probably 999 in 1,000 know that

While the province of the physician lies in the prevention and cure of disease, there are times when he must enter the domain of morals also, and nowhere will he find better opportunity for teaching morality than in giving advice regarding the sexual apparatus, for here he can teach purity from the standpoint of health, while the spiritual adviser has less influence, because he teaches that the infringements of virtue are punished in a hereafter, an indefinite time and in an existence that is partly speculative

There is a woful ignorance among the laity regarding the purposes of the sexual apparatus which needs dispelling We must teach that these organs are not simply for the elimination of waste products, nor for the simple gratification of an animal passion

We will need spend little time in attempts to prove illicit intercourse wrong, for that is pretty generally accepted, and there are other fields for us to cultivate that are more promising of results

The hygiene of the generative organs has had little attention until about the age of puberty, up to this period it has been considered a shameful act to call attention to these organs, and the fear has been expressed that there would be danger in so doing, a danger that I can not appreciate. Let us attempt to make respectable the generative organs. I can not see why a child should not be taught the care of the sexual apparatus, as well as the care of the eyes, ears, nose or any other organ. Granted that this instruction is proper, who is to give it and how early in life is it to be given? The latter part of this question can not be answered in months or years, for we all know that different individuals of the same age are in reality of different ages when it comes to the knowledge of the sexual apparatus, depending in part on the natural aptitude of the individual and in part on the environment, but just as soon as these organs are objects of curiosity to the child instruction should be begun.

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* Read in the Section on Hygiene and Sanitary Science of the American Medical Association at the Fifty seventh Annual Session, June, 1906

The first part of the question is easily answered, for the supposition is that parents are anxious for the welfare of their offspring and naturally should be the instructors of their children in their care of the sexual apparatus, and it remains for us to impress on the parents the necessity of their giving the instruction. I well know the objection that will be offered to this statement, but I can assure the objector that if this instruction is not given in this manner improper information will be given by improper instructors. Many cases of venereal infection occur before the age of puberty is reached; some of these might have been avoided had the danger of venereal infection been known.

We must teach that continence is compatible with health. Among his associates the boy assumes to prove his manliness by his ability to use tobacco or liquor. Sexual intercourse is a frequent topic of conversation, and the boy that boasts of a dose is considered a man, indeed. Sometimes physicians have advised the sexual act as a cure for certain conditions by recommending marriage. Such advice is debasement of the sexual function and prostitution of the sacrament of marriage. Patients reasoning on such erroneous advice come to the conclusion that the sexual act is the cure and select a paramour instead of a wife.

While much will be accomplished by early instruction, it will not be general and we have to face a grown-up public that does not know to what extent venereal diseases prevail and we face the necessity for statistical data to prove our assertions. Figures are convincing arguments, but medical figures are often unreliable even when used for diseases that are not shamefully contracted, while applied to the diseases we are considering, having no reports made to health boards, nor having hospital accommodations for those suffering from these affection, reliable data is difficult to obtain.

Venereal statistics should not only give numerical frequency, but should also give attending sequelæ, emphasizing the sequelæ. Statistics that are well within the truth, instead of being overdrawn, that are beyond contradiction, would furnish us with a text-book for our use from Maine to California. Have such data authenticated by the American Medical Association. The public does not realize that syphilis and gonorrhea are dangerous diseases, nor that a lengthened treatment is necessary for their cure, neither does it realize that danger exists of these diseases being contracted innocently. Years ago when gonorrhea was considered simply a local affection, the discharge disappearing, the disease was pronounced cured, and, as this occurred at times very quickly under treatment, the affection was considered trivial by the profession, a belief that the laity soon adopted. Since the discovery of the gonococcus and the difficulty of its destruction our views have changed, but the laity still hold to the belief that a clap is no worse than a hard cold. That a gonorrhea ever causes constitutional troubles, or that it can ever be contracted by the use of napkins, etc., seems to the public absurd. It is entirely ignorant of the sequelæ that follows gonorrhea so often, and the death rate resulting after operations rendered necessary by these sequelæ is attributed to unnecessary surgery. It will require persistent effort to overcome this belief of the people, supported, as it is, by some members of our profession who regard a gonorrhea on the level of a five-dollar bill.

Regarding syphilis, the prevailing impression that, with the disappearance of the initial lesion, the disease has lost its contagiousness, must be combated. The laity know that the disease pursues a long course, but think that the only contagious lesion is the chancre, and the only danger lies in sexual intercourse. The innocent contraction of venereal affections, especially syphilis, tests the credulity of the average layman, and when the statement is made that body contact is not even necessary to catch the disease their credulity is not sufficient for belief.

We must prove these diseases chronic, lasting for a period of years, and during all this period any skin lesion or mucous membrane lesion or the blood of a syphilitic is just as competent to cause syphilis as the virus from the chancre. Warnings must be given against the careless use of places of public convenience, of public drinking cups, towels, combs, etc., and the act of kissing. I think it would be well to teach that all sores are dangerous, warning against contact with them for fear they might be syphilitic.

Another fact that we must emphasize is that it takes a long period of persistent treatment to cure these affections, if gonorrhea is ever cured, and the dangerous sequelæ that are liable to follow cases not properly treated must also be emphasized. The quacks make the work harder for us by their advertisements of their ability to cure these affections quickly and effectively. The majority of the laity know no difference between the advertising charlatan and the honorable physician, and the statement of one has as much weight as the statement of the other. It will be hard work for us to convince the people that the quacks are lying.

The danger of inheritance of syphilis is another fact that must be emphasized. The public has little idea of the enormous number of deaths resulting from syphilis. A bare statement of the fact is too appalling for their belief and we are accused of trying the fright method for our purpose.

If it were possible to clothe syphilis and gonorrhea with a semi-respectability, so that these pathologic conditions could be discussed by the laity as diseases dangerous to life and health in the same manner that tuberculosis is discussed much would be gained. Syphilis and gonorrhea are so often contracted innocently that the cloak, "venereal," should be removed from them. If we can accomplish this, the death rate and morbidity that result from venereal diseases will be realized by the community and measures will be taken to control these affections.

Another matter that the public needs to learn is the necessity that exists for hospital accommodations for those that suffer from venereal diseases who not only have not the proper facilities for [illegible] but who become agents for the sp[illegible] innocently. Those of us that [illegible] ences know of the difficulties that attend the treatment of these affections when the patient can not be controlled No general hospital admits venereal cases until the period of contagion has passed Every hospital should have accommodations for venereal cases Reporting by health boards of venereal diseases would soon provide hospital accommodation for patients with gonorrhea and syphilis

Prostitution is the most fruitful source of venereal affections The public knows this What we are required to do in this connection is to demonstrate that a certain amount of legal control in isolating the diseased would be of great value. Prostitution will never be stamped out This we must realize and direct our attention to measures that will minimize the dangers of contagion from this source

423 Stevens Building

WHAT SHOULD WE TEACH THE PUBLIC REGARDING VENEREAL DISEASE?*

GEORGE WHITESIDE, M.D
PORTLAND, ORE.

Let us briefly consider, first, what we do teach regarding venereal disease, second, what deduction the average layman draws from information received, and, third, in what way our teaching may prevent the spread of infection

As physicians we teach the public by precept and by example, we do not give systematic lectures or demonstrations to laymen, we give brief and fragmentary personal talks to our own sons (generally not to our daughters), to the children of our patients occasionally, but generally after the acquirement of disease and not before, very occasionally a few lectures are given to young men as members of a college or school or church, but never to my knowledge, to young women Now and then one learns of a class of men being instructed in methods of prophylaxis That is all, except such fragmentary individual instruction as the physician gives to his venereal patients What can we expect the public to learn from us in such a variety of unconnected and unsystematic ways?

I think we may expect just what we know to be the results They may be summarized as follows

The average boy is wide awake, bright, of inquiring mind and credulous The average young man is his instructor and teaches him that gonorrhea is no worse than a cold in the head, that chancroid is due to filthy habits and can be entirely avoided by bathing and that syphilis is a rare and loathsome affection which is absolutely incurable

We know these to be in brief, the opinions held by thousands of intelligent laymen and we know them to be from first to last untrue

The average girl knows nothing of venereal disease When she becomes a young woman she either remains in this blissful state of ignorance or, if she becomes intimate with low companions, she is taught by them to believe that gonorrhea is not virulent in the female, that its worst consequence is leucorrhea With regard to chancroid and syphilis she believes the same misinformation given above

We know these versions of the story to be also untrue to fact These beliefs are the result of lack of intelligent instruction On the other hand of how much benefit would it be to humanity to know the truth? I believe very little, indeed If people were taught that gonorrhea is sometimes mild, transient and easily cured and at other times severe, protracted and difficult to cure, where would the advantage be? Would any given individual hesitate longer before exposing him or herself to infection?

If people believed syphilis to be, under careful treatment, mild and almost certain to be cured, would it encourage chastity?

These diseases have been prevalent since the earliest times of which history tells us, men of all races, of varied intelligence, of all religions, of all schools of medicine have thought, written and spoken on this theme Nothing new can be said on the subject Very likely in Pharaoh's time some Egyptian or Arabic medical society held just such a symposium on the subject as we to-day What has come of the effort of centuries? Is venereal disease less prevalent to-day than then? I think not. Our enlightenment has not exterminated it

I believe that effort to stamp out venereal disease by giving instruction regarding its nature, natural history, sequelæ and amenability to treatment is time wasted So long as men desire, women and men reciprocate, venereal disease will exist and that will be as long as there are men and women in the world The love of honor and justice, or the fear of evil, will always deter some but not all from venery

According to the most modern ideas it is now thought best to try to reform vice by attacking it in a previcious stage. This axiomatic epigram appears in a monograph entitled, "Alfalfa in the Willamette Valley," by W W Cotton. In speaking of seed and seeding he describes a vine called dodder which is a parasite of the alfalfa plant. Mr Cotton says "The proper way to avoid dodder is not to plant the seed." How simple this statement and yet how all comprehensive! To paraphrase it we may here say that the proper way to avoid venereal disease is not to plant its seed That is the modern method—to look forward and not back, to train the child in order that the next generation may be cleaner and more manly than the present one

We must rely on the prophylactic value of very early education If the anatomy of the sexual organs and their physiology and use were taught by every mother to her young children as soon as they are old enough to understand at all, if we did not wait until puberty but began at three or four or five years of age, would it not be better?

It is the mystery that shrouds the subject that renders it attractive It is the secrecy of his elders that piques the curiosity of the child A reasonably full explanation that satisfies the young mind's thirst for knowledge will dissipate the fog of mystery and render the subject no longer interesting

Later, about the time of puberty, desire appears as a tempter It is the strongest and most natural instinct of our natures the instinct which leads us to wish to procreate, to regenerate the race This can never be repressed Education will not eradicate sexual desire. Should it do so the species would eventually become extinct

Teaching and example may sometimes guide and train the mind to control the desires of the flesh until reason releases them and allows sexual passion an outlet Such teaching should inform the mind of youth of the energy which should be potential It should advise habits of cleanliness, both mental and physical, and should picture the possibilities of venereal disease This last should not be overdone The fear of the contraction of disease deters only the cowardly and these it often drives to the unnatural outlet of masturbation Certainly venery is preferable to the mental degradation of the other vice

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* Read in the Section on Hygiene and Sanitary Science of the American Medical Association at the Fifty seventh Annual Session June 1906.

Boys of 15 or 16 may be taught the symptoms, nature and results of gonorrhea, chancroid and syphilis, and the importance of proper treatment and how pernicious amateur tinkering is This should not be done to frighten them, but simply as information It is best done by the parents or by the family physician, or in the case of public schoolboys, whose home influence is sometimes not of the highest order, by some physician appointed to lecture to them on the subject. This latter method is probably the least beneficial

In later life among mature men, such teaching is certainly less effective To prevent venereal disease and to lessen the number of cases of it in the community, lectures on prophylaxis are undoubtedly of value for a time until men by habit become careless Lectures on anatomy, physiology or symptomatology do not restrain or regulate the desire of mature individuals Lectures on the curability of not only acute but chronic venereal disease and even on the remote results dissipate the erroneous ideas before mentioned Whether such knowledge is conducive to public happiness or not is another question

Does it do good to teach the frequency of epididymitis or stricture or to explain the causative relation of gonorrhea to ophthalmia neonatorum or pyosalpinx? Would gonorrhea be less frequent if it were generally known that a specific urethritis can not be contracted from a non-infected woman during the menstrual period, that intromission is not necessary for infection, that varicocele rarely produces sterility, and that physiologic seminal emissions are not a sign of impotence?

The education of our girls is a different matter They should understand their anatomy and physiology, but let us spare the sympathetic sensibilities of girls of the better class Why tell them of venereal disease or loathsome perversions of sexual desire? Girls who must protect themselves, who unfortunately have no one to look out for them, should be as well informed as the boys are They must be taught the danger there is for them in drink, because it leads to venery, the possibility of conception and the crime of abortion They should be taught these things by their mothers or, if that is not possible, by some high-minded woman physician

The parasites known as gonorrhea chancroid and syphilis are as destructive to the human body as the dodder vine is to the alfalfa plant, and our axiom is that "the proper way to avoid dodder is not to plant the seed" Let us, therefore prepare the soil of the mind by well-chosen education begun very early and continued into adult life, because in that way we may best avoid venereal disease by teaching the youth or maiden not to plant the seed and also by giving it no encouragement to grow

Whether or not such methods will better the condition of the world to-day is doubtful but if we do not try it we can not find its sphere of usefulness

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Study Food—There are many details respecting the digestion of all classes of food that must be known before one can apply dietetics in a practical and successful manner —*Medical Times*

WHAT SHALL WE TEACH THE PUBLIC REGARDING VENEREAL DISEASES?*

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It is the united sentiment of modern students of this subject, that as a measure of public safety if for no other reason the public should be taught certain facts regarding the venereal diseases To me has been delegated the duty of assisting in the discussion of what should properly be brought within this category

Such teaching should be considered under two headings that by means of printed communications, and that by means of lectures The scope of the instruction embraced in the printed matter necessarily will be smaller than in a lecture or a series of lectures Teaching in this manner has lately been undertaken in Germany by the Society for Combating Venereal Diseases, the national organization of that country for sanitary prophylaxis This society has issued for general distribution two circulars on the subject one for women and one for men,[1] written in the simplest possible language, intelligible alike to the uneducated and to the educated In these circulars the religious aspects of the question are not considered the society deeming it advisable to leave their consideration to other hands The circulars have been distributed free by the hundred thousand, in the German universities, factories and mercantile establishments of the Empire They have aroused the interest and appreciation of the people whom they have reached, and must already have done much good, although so recently promulgated

Since 1895 Professor Lassar has annually given public lectures at the University of Berlin on the same subject —not for the benefit of the medical students but for those outside of that department more especially

While it is manifestly not desirable nor feasible to go into the subject to a profound degree, the curriculum of such teaching should embrace the fundamental truths of both the physiology and pathology of these affections The simpler phases of genitourinary physiology is a proper basis on which to lay the foundation of instruction that is to safeguard the public against the many and obscure pitfalls of the so-called venereal diseases Both youths and adults should know the rudiments of sexuality, of sexual immaturity and the consequences of imposing sexual activity on this delicate system when it is still undeveloped of sexual maturity and its pregnant possibilities, both for good and for evil, of the sexual act, of impregnation and reproduction The future of many an innocent girl is blasted because of lack of knowledge of even this much of her nature and being The rudiments of sexual hygiene should be explained and numerous superstitions that obscure the public mind should be exploded one of the most prominent of which is the belief that it is injurious to the organs to go without intercourse for any length of time

METHODS OF DISSEMINATING KNOWLEDGE

A preliminary review of this kind paves the way to a better and easier understanding of the matters embraced in the further teachings

The names and nature of the three diseases usually termed venereal should be given, indicating: First, that while gonorrhea, caused by the microbe called the gonococcus, is usually a local disease affecting the urinary tract, in many cases it is spread throughout the system, and its possibilities for disaster are great in either capacity; second, that chancroid is a purely local, though actively-ulcerating sore, incapable of giving rise to systemic effects, whether mercury be taken "to keep it out of the blood" or not; thirdly, that syphilis, inaugurated by the local sore called chancre, is always a systemic and constitutional disease, also, whether mercury be taken or not "to keep it out of the blood."

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[1] THE JOURNAL A. M. A., April 14, 1906

The next step in the teaching is one of the most important in the whole curriculum: the modes of dissemination of these diseases. It should be known that all three affections may be transferred either with or without venereal intercourse. That gonorrhea and chancroid are conveyed only by transferring some of the discharge (pus) of those diseases, while syphilis can be conveyed not only by transference of discharge from any of its manifold lesions at various parts of the body, but also by the blood of the syphilitic individual during the active stage, and that this contagious period lasts for three or four years.

Thus, the field of contagion for syphilis is much larger than for either of the two others; its scope is almost unending. While chancroid and gonorrhea are transferred almost exclusively by sexual intercourse, either legitimate or otherwise, syphilis is transferred, in addition to this mode, by means of the various household utensils used in eating or drinking, such as spoons, knives, forks, cups, smoking-pipes, cigars, towels; by the act of kissing. Many epidemics of syphilis have been started and spread by such innocent media, including hundreds and even thousands of persons, young and old. The very teaching of these methods of innocent contagion illuminates the ways in which they may be avoided.

The many fallacies and superstitions of the public with regard to these diseases should be met and exposed. The common saying that gonorrhea "is no worse than a bad cold," is one of the worst of these; that it is easily cured by the shot-gun prescription of the druggist-friend; that the disease is well when symptoms subside and discharge ceases; and that "curbstone advice" is of any value whatever in these matters, should all be confuted as energetically and as rapidly as possible. The disasters to which they lead are inestimable. The mercenary motives of quacks and charlatans should be exposed and their villainous teachings rejected.

BEARING OF THESE DISEASES ON GENERAL HEALTH

The bearing of these diseases on the general health of the affected individual should be explained, both as it relates to the *present condition* and to the future. The far-reaching consequences and complications of these diseases when related, make an impressive argument for their avoidance by the tempted public. The public should learn that gonorrheal infection extends not only into all the organs of the genitourinary system, of both male and female, but also, on occasion, involves the blood, the vascular, the lymphatic and the nervous systems, the joints and the eyes, and results in such sequelæ as complete closure of the urethral outlet through stricture, impotence, sterility (42 per cent. of gonorrheics becoming sterile, while 50 per cent. of all sterility is due to gonorrhea), and that syphilis causes not only the disfiguring and dishonoring lesions of the skin, the face, body and limbs, the loss of hair, attacks the digestive, vascular and lymph systems, the bones, muscles and special organs of the body, but also results in such destructive conditions as the ataxias, paralysis, nerve degenerations, bone necroses (resulting in saddle-nose and other disfigurements), insanity and imbecility. When these things are well known outside of the narrow confines of the medical profession, a potent influence is established for recognizing these diseases and doing what can be done for limiting their dissemination.

RELATION TO MATRIMONY AND HEREDITY

The relations of the affections under discussion to matrimony and to heredity should not be overlooked. The intimacy of married life is such that it is almost inevitable that when one of the contracting parties is affected the other becomes infected also. Of married women who acquire gonorrhea, fully 85 per cent. are infected innocently, through intercourse with their husbands, and the same is no doubt true of the other two of these affections.

When it comes to heredity, both gonorrhea and syphilis display their appalling effects. As a prolific cause of so-called race suicide, voluntary abortions are as nothing when compared to these. Gonorrhea exhibits its malign influence by rendering its subjects, both male and female, sterile, preventing *impregnation*; while syphilis attains the same end by bringing about countless abortions, even with women who yearn for motherhood, whose fondest wish is that of rearing a family. Syphilis in either parent contributes to the same unhappy end. When the people learn of these influences they will be able to *recognize the more readily the hidden meaning* of repeated events of this sort, and to take the precautions that will change them. Fortunately, chancroid has no hereditary influence. While gonorrhea is not inherited, its calamitous effects are not delayed long after the birth of the child of a gonorrheic mother. Fully 80 per cent. of all blindness, we are told, originates in gonorrheal infection of the eyes of the child during parturition, not to mention the number of such infections of the eyes that occur in adult life.

If it is important to teach people the full nature of these diseases when they do occur, it is equally as necessary to impress on them the extent to which they exist, both *among nations and among* the people themselves. The nation that is exempt from venereal imputation has not yet been discovered. So far as statistics are able to determine it, syphilis prevails among urban populations to the extent of from 7 to 14 per cent. at the present time; and it is further estimated that upward of 90 per cent. of all men have gonorrhea at some time in their lives. Like pale death, that knocks with equal fate at cottage door and palace gates, these diseases are not respecters of class, age, color, condition or occupation.

LONGEVITY OF THESE DISEASES

The longevity of these diseases, both with respect to their activity as diseases, and their infectiousness, should be explained. Gonorrhea is both active and contagious for an indefinite length of time, only ceasing in these respects when the organisms are killed out. The capacity of syphilis for doing damage is indefinite and scarcely limited by years, but its *period of contagiousness* is not longer, usually, than about four years.

MORTALITY

The mortality of these diseases forms an interesting study, and a surprising one, in certain respects. As a direct cause of death, syphilis ranks far below gonorrhea although the contrary is no doubt, the current belief among the people The implacable gynecologist has enlightened us on the terrific mortality of gonorrhea, in his exposures of its relations to pus tubes, to peritonitis and other end-results in women We are told that 65 per cent of all gynecologic operations are due directly to gonorrheal infection, either within or without the pale of matrimony

CURABILITY

The curability of these diseases is, likewise, a subject worthy of elucidation for the people Noeggerrath has said, "Once a gonorrhea always a gonorrhea" While it is probable that few, at the present time, subscribe to this sentiment, it is a lamentable fact that the people in general are prone to swing too far toward the opposite extreme, and to believe in the triviality of the same condition With adequate and comprehensive treatment directed, primarily, at the destruction of the gonococci wherever they may exist in the organism, followed by measures to heal and to restore the affected tissues, it is probable that by far the greater majority of cases of gonorrhea are cured permanently The belief in the incurability of the diseases rests, probably, on the fact that the majority of physicians, as well as the people, set too low a standard of requirement on the term, cure They look on the absence of discharge and of active symptoms as indicative of recovery, when as a matter of fact these form very poor testimony to that effect, there may be abundant gonococci in a posterior urethral or seminal vesical inflammation without any outward evidences whatever It is, indeed, just such cases that lead the infected individual into making the disastrous mistake of having intercourse and spreading the contagion, whereas if he had an active discharge he would not think of doing such a thing Moreover, the person who treats himself on this plan—of trying merely to stop the discharge—is the subject of an endless number of recurrences, which he may interpret as new cases, and consider himself wonderfully successful in curing them in a few days, with his sure-cure prescription, while, as a matter of fact, he never cures any of them He merely stops the discharge, remaining as potential as ever for the dissemination of the disease and for its recurrence in himself

It requires three years, approximately, of very steady treatment for the cure of syphilis, even in cases of moderate severity, in other cases, that display evidences of rebelliousness treatment should be continued for two or three or possibly more years in addition to this With such persistent endeavor methodically carried out, a cure may be expected in the large majority of cases

INDICATIONS OF RECOVERY

The indications of recovery from these diseases is an exceedingly important feature of their study, and is one that, fortunately, has fairly clear means for identification With reference to the gonorrheal infection, nothing short of clearing up of both first and second urines, with the exception of a possible few mucous shreds in the first, which shreds contain no gonococci and only a moderate number of pus cells should be accepted as indicative of recovery And in isolated instances even these strict requirements may be too lenient I have seen a few cases in which both urines were perfectly clear and yet massage of the seminal vesicles expressed pus from those sacs If there is reason to suspect the accuracy of a belief in the recovery of a given case tests may be made by having the patient drink beer, which will reawaken the gonococci into activity

With reference to syphilis, the rule usually followed is, after treatment has been carried on for what is considered a sufficient length of time, to allow the patient to go two years without any antisyphilitic medication, if any indications of the disease appear, to give another year's continuous medication, if none appear, it is well to give an occasional short course anyhow, to make assurance doubly sure, if for no other reason

The absolute necessity of making searching investigation into this question by the various means at hand, before entering into matrimony or essaying such relations, should be taught the public This they should be made to understand, even if they forget all else connected with these diseases

DISCUSSION

ON PAPERS BY DRS MORROW HERDMAN, HOLTON, TUFFIER, CARRIER, WHITESIDE AND LEWIS

Dr Ludwig Weiss, New York, agreed that publicity is demanded, but asked how we are to reach the public remarking in regard to the symposium held in 1904 at Atlantic City that one newspaper reporter received a telegram from his paper saying, "Don't touch it" He said that physicians read papers at medical societies, but that they are relegated to the archives Publicity, he declared, is an educational necessity, the newspapers must tackle the subject With the hospital and dispensary returns falsified in not calling venereal diseases by their true names, it is only natural he said, that the New York Department of Health, in stating the causes of death in 30,000 cases for 1901, gives only 172 deaths from venereal diseases He asked where are the pus tubes, where the sequelæ of mutilating operations on women, where the gonorrheal endometritis, where the joint diseases He said that these diseases should be reported to boards of health without names of patients, stating only the sex and age He said that as the morbidity from these diseases becomes known they will bear the stamp of official recognition and we would soon be able to draw conclusions as to the mortality This source of publicity, he said, would greatly help to combat venereal disease

Dr C E Woodruff, Detroit, said that his practice is in the Army, where medical men are naturally supposed to know a great deal about venereal diseases because soldiers are reputed to have a great deal He declared that he wanted to deny that first of all He said that soldiers have less venereal diseases than an equal number of other young men from the same class of life He stated that he is surgeon of an army post and has one ward which he devotes to venereal diseases, and for three weeks recently that ward was empty He denied that there is so much crime and immorality in the Army as people are fond of stating Army surgeons try to instruct soldiers regarding the dangers of venereal diseases In reference to instruction to college boys he said that he asked the president of a college in New England what he was going to do about the matter The president said that he did not know He had received a great many circulars but none were entirely satisfactory He had read the lectures of Prof Eric Pontoppidon of Copenhagen and these were pronounced the best and were probably appropriate for his students

Dr. Ferd C Valentine New York said that all serious students of this momentous question must agree on some points The first of these is that so long as mankind remains frail, as it has ever been men will acquire venereal infections Many of those infected were so unfortunate during alcoholic inebriation Perhaps an equal number, especially of boys were brought to prostitutes by other boys Statistics on this question are as yet not obtained Until recently a larger number than now were advised by their fathers to cohabit under a belief in the physiologic necessity of the act. The majority however are impelled by the naggings of sexual desire to seek its gratification These are facts to which, [illegible] in vestigators we can not close [illegible] All [illegible] the etiologic factors will [illegible] is true that the majority are ignorant of the dangers of venereal diseases, and this ignorance is by no means limited to the lowest social strata. Indeed, physicians who devote their energies exclusively to the study of genitourinary and venereal diseases have among their patients not a few physicians. This may be explained by the fact that until recently venereal diseases received but scant consideration in medical colleges. Such a taboo rested on them, Dr. Valentine said, that he was once ruled from the floor for mentioning them in this Section. That occurred fourteen years ago. Since then the dangers of venereal infection have been more widely studied by the medical profession. A few courageous men dared to brave public opinion by forming the American Society of Sanitary and Moral Prophylaxis, whose prime purpose appears to be to overcome the ignorance which fastens on the state the Moloch of venereal disease. Dr. Valentine avowed himself an enthusiast for the society's objects, though he is not such an optimist as to think that venereal diseases will be entirely stamped out. He believes that the majority can be taught the need of very early and very active treatment of venereal diseases. Once this is generally understood, the greatest danger to the individual and the saddest results to the family will be minimized.

Behind the study of venereal diseases is the ancient question of prostitution, clandestine and public, and at the very outset we must acknowledge that, in our present light, clandestine prostitution is beyond study. This, he said, does not crush the hope that the future will bring an understanding of the problem which will lead to its management. Public prostitution, however, is coeval with written history. That it is likely forever to continue is perhaps beyond dispute. Its study, however, can tend but to reduce its dangers. Many excellent men attribute the growth of prostitution to the growth of communities. They hold that prostitution is the fungus of our social evils, of environment, of defective education, of the scarcity of honest work for girls and women. Dr. Valentine denied this, first, because it is untrue, and, secondly, because it is an insult to womankind. Its untruthfulness is shown principally by a self evident fact. In the past decade innumerable avenues for work have been opened to women, yet prostitution has increased. Dr. Valentine denied the accepted view, because it stamps every woman as a possible prostitute. It means that virtuous women might become whores if their social condition, their environment, their faulty education or lack of honest employment led them to need. He insisted that if such women were thrown into the deepest abyss of despair they would rather starve than prostitute themselves. He explained that he does not deprecate the noble efforts made to educate, to elevate and to develop means for the procurement of honest work for women, on the contrary, he would gladly go further than the now proposed plan to this end. He declared that he would labor that women who work for a living be aided and guided to the mental and physical superiority for which they are manifestly intended.

It requires, however, no marked pessimism, he said, to see that the best made efforts will not reduce prostitution. This does not exclude justice to the trebly unfortunate creatures to whom the first birthright of woman is denied. They are all defectives. Pauline Tarnowsky measured a large number of Parisian prostitutes and found all with the stigma of degeneration, no matter how well raised, how exquisitely educated or surrounded by whatever affluence, prostitutes tend to reversal to that savagery in which polygamy is the rule. Were this view accepted, the greatest of problems could be better studied. Concisely, then, he said, a mental or moral defect makes prostitutes. No reliance can be placed on the now advocated means to check the ravages caused by this evil. Pamphlets on the subject have no meaning to the unfortunate beings. It is in the nature of things that these females will weep hysterical tears in public. Among their associates they revile those who would reform them and defile the literature printed for their moral elevation. Occasionally well meaning but misguided crusades are instituted against prostitutes. They lead to hounding them with the police. This is as sensible as maltreating the insane to beat the devils out of them.

The consciousness that we are not yet prepared even to reduce prostitution should not deter us from striving to limit its evils. To chase prostitutes from their chosen haunts drives them into all parts of a city. Thus disseminated, they multiply as foci of physical infection and moral contamination. To protect clean parts of cities the prostitutes should be left in the districts which they have selected. Thus congregated, they can become amenable to health board regulations. Systematic examinations of their genitals, even twice daily, as suggested, would be of no avail, for between two such examinations a prostitute can easily infect twenty men. Moreover, those who would conscientiously examine a female for gonorrhea alone know that it can not be done in less than ten days. Segregation would require the confinement in hospital of any prostitute who had infected a man. If detained until cured she would be prevented, at least during that period, from infecting others. Dr. Valentine emphasized these points: 1. The people primarily should be instructed in the gravity of venereal diseases. 2. The public should be taught that to escape the ravages of venereal infection early and active treatment is necessary. 3. The quacks who profit by the prevalent ignorance will have their robberies reduced when the public has been taught to understand them. 4. All public-spirited citizens, whatever their occupation, should be persuaded to join the crusade against venereal diseases, at least by becoming members of the American Society of Sanitary and Moral Prophylaxis. 5. Until public prostitutes be given the right to live in certain districts it will be impossible to do anything to protect them or to protect the public against them.

Dr. Seneca Egbert, Philadelphia, believes in education on this subject; he believes that it is practically the only way of reaching a betterment of conditions, but he does believe that before we give the public this special education they ought first to have the general education in public health or hygiene. Dr. Egbert said that a few months before, at the request of Dr. Hurty, he prepared a paper which considered the teaching of hygiene in this country. Among all the colleges in this country, how many, he asked, have instruction in hygiene for the students? Dr. Egbert knows of only one that gives practically every student a course in hygiene. In Harvard one can not get such a course, except a small optional one in anatomy. In fact, there is not a course compulsory on practically all the students in any of the colleges, save one. Every freshman at Princeton must attend the lectures and receive full instruction in hygiene or, as Dr. Egbert likes to call it, public health, and Dr. Woodhull, who gives these lectures, weaves into that instruction this special education that every one ought to have. There are about 114,000 college students in this country. If the students in our colleges to-day, who will mostly graduate in the next four years, were fairly and wisely instructed, not only in these matters of the sexual and social evil, but in the fundamental principle of vital resistance, development and immunity, and of the importance of living a clean, moral and wholesome life, not only for the mind's sake but for the body's sake, most of those men and women would be living centers for the spreading of this education to the community around each of them. And if these college graduates can be used as a nucleus, the opportunity for which, Dr. Egbert believes, is right at our hands, we will do a great deal. How many normal school teachers in this country, he asked, get any instruction at all on general hygiene, not to mention sexual or social prophylaxis? In 1903 there were about 63,000 students in the various normal schools in the United States, of these there were less than 25 per cent. receiving any instruction in public health or hygiene, and Dr. Egbert ventured that there was none receiving instruction on moral prophylaxis. In 1900 30 per cent. of the population was under 14 years of age, and this is probably equally true to-day, also, approximately 50 per cent. of the total population of the country to-day is under 24 years of age. These young people are to be taught by the normal school graduates, most of whom have no instruction in hygiene. It has been said there are 14,000,000 young men in the country to-day under the age of 30, and that 50 per cent. of those 14,000,000 have some venereal disease before they reach 30. If these are facts, Dr. Egbert asked if we have not here great opportunities to extend this educational work and to carry on the fight where we can hit the hardest. Dr. Egbert stated that his data were collected early in 1904 and that since then courses in hygiene or public health may have been established in some of the colleges or normal schools that did not previously have them

Dr L Duncan Bulkley, New York, thinks that we are making a magnificent crusade in this direction, but that there is one point that has not been emphasized enough namely, that in some way or other boards of health should have syphilis, gonorrhea and chancroid on their list of reportable diseases He believes that the moment those names appear on the public lists the mystery will largely vanish The moment the number of cases existing begin to be tabulated, then there will be material for such medical work Ten or fifteen years ago in his book on "Syphilis in the Innocent" Dr Bulkley pleaded for that, he pleads for it every time that he can get an audience

Dr J N Hurty, Indianapolis, confined his remarks to the matter of legal control In that line nearly every speaker on this subject says nothing can be done In Indiana they are trying an experiment. The last legislature passed a law that no person afflicted with a transmissible disease (meaning venereal diseases principally) shall be privileged to marry The question is, how shall it be executed? Of course, penalties attend, and the execution of the law has been left largely to the State Board of Health The State Board of Health prescribes the questions to be asked of every applicant to marry, and licenses must be issued for all marriages The questions have been formulated and have been in use for over a year They are not severe, not exacting for the beginning, and the first opposition has subsided The answers to these questions must be sworn to, and it has been said that the law simply makes more perjury Dr Hurty does not believe this is the case any more than happens in giving sworn court testimony Of course, there is some perjury In one instance in Indianapolis a marriage was stopped The young man confessed to the clerk, when he applied for his marriage license, that he had gonorrhea, but that he believed that he was cured, though he did not know The clerk had the power under such condition to refuse a license The applicant was examined and was found to be infected, and that marriage was prevented Of course, there were heartaches, but perhaps not near so great as might have followed the marriage

It is proposed to go one step further and to have all such cases reported It will be a difficult matter, but it can be accomplished Many of these patients go to drug stores and are never seen by physicians, but a great many of them can be recorded and their names should be properly classified to guide the clerks who issue marriage licenses This will not cover the whole field—nothing like it—still, Dr Hurty contends that it will do some good This Indiana law designed to prevent the marriage of diseased persons was written by one of the highest judges and for that reason the people of Indiana are confident that it is constitutional Dr Hurty suggested that while studying this important question of personal purity before marriage the medical profession assume a more serious attitude, stop all jokes and all light references to venereal diseases Let no vulgar stories pollute the lips of the physician

Dr William Lee Howard, Baltimore, said that in his opinion there is one and only one way that this discussion or these discussions could benefit the people that is through publicity It has been remarked that these meetings should not be reported in the press If these are truths that we are talking about, they should be published He knows of no truth that does harm It is false reasoning that does harm it is the hiding of these things which produces the morbid curiosity in the young—introspection They will meet or see a word that will send the young man to the libraries and if it is only put before the young that every human being and beast that they see is the result of sexual gratification and not sensual the mystery will be cleared away and they will look on these matters as they do on every ordinary condition Dr Howard emphasized the fact that it is not innocence that ruins a girl but ignorance

Dr. M H Bailey Cambridge Mass said that instruction in hygiene has been given at Harvard College for the last four or five years and previously at irregular periods Ten or eleven years ago by invitation of President Eliot an address on the same subject was given to students in Harvard College by Dr Cook, former president of the Middlesex South Medical Society During the past year practically all the freshmen in Harvard College were obliged to receive instruction on venereal diseases, that is all those students who took English A—which means about 550 out of 670 or 700 freshmen—received instruction in plain language

To delay the communication of such knowledge until the end of the freshman year is a great mistake There is no time in his college career Dr Bailey said in which a student is so likely to fall into just these dangers as in his freshman year He feels that it is a part of his curriculum as one might say—that he must know everything that there is to be known If he could receive proper instruction before he goes to college it might give him a different view of things and save him much physical and mental suffering Dr Bailey did not agree with the statement that it would rot make much difference if young men did know about these things It does make a difference. He has many records of young men with whom it has made a decided difference Such instruction should be given early It should not be forgotten that the great majority of young men never go to college

Dr Prince A Morrow, New York, said that the Society of Sanitary and Moral Prophylaxis, organized in New York over twelve months ago, has been the recipient of a great many letters from teachers, fathers and even mothers, and the universal sentiment—especially of teachers—is that it is impossible to make any effective argument to young men against incontinent living so long as their minds are imbued with the idea of what has been termed the sexual necessity that is, that sexual intercourse is necessary to health Now the medical profession, Dr Morrow declared, is responsible for this heresy, or it is by the laity held to be responsible, because all these young men state that they have imbibed this view on the authority of physicians A number of teachers have written to Dr Morrow, stating that so long as doctors tell young men that sexual intercourse is a necessity they can not do one iota of good in trying to teach them the principles of chastity and right living Resolutions declaring continence to be not injurious have been passed by the Brussels International Congress some three or four years ago, by the German Society for the Prevention of Venereal Diseases, by the American Society of Sanitary and Moral Prophylaxis and by a number of state medical societies—the Georgia society and one or two others

Dr C H Cook, Natick Mass, said that about thirty five years ago Frank H Hamilton, in his 'Principles and Practice of Surgery," said that the poisons of syphilis and gonorrhea are so widespread and have contaminated the blood of so many people that in his opinion they are retarding the physical and intellectual progress of the human race If that were true then, Dr Cook said, it must be equally so to day for no special effort has been made to control them Some one has said that 'the silence of the wise man does more wrong to mankind than the slanderer s speech" Concerning these subjects the members of the medical profession are the wise men and the wise women If the sentiment of that quotation be true Dr Cook said that a great responsibility rests on our profession He appealed to the older men and women present to recall the situation thirty or more years ago when women first began to study medicine and to recall their position at that time Dr Cook was then a student in Bellevue Hospital Medical College At the clinics in Bellevue Hospital women were sometimes subjected to rude and almost insulting demonstrations because they were considered out of place and lacking in womanly delicacy and refinement He said that there were professors notably Professor Sayre who in language not to be misunderstood said that women had equal rights there with the men and if necessary the men would be turned out Dr Cook said that many women were present in the section meeting and no question whatever was raised about the propriety of the subjects discussed before the mixed audience He believes that the public can be brought up to the same standard that women in the medical profession and nurses have attained and that men have attained with them It seems to Dr Cook that there are only two questions for consideration First, is it right that diseases which are causing more suffering and more deaths than any other diseases shall be allowed free course, with no efforts made to control them? Second, whether we are in the wilds of Africa, under the shadows of Harvard, on Commonwealth Avenue, on Fifth Avenue or anywhere else, there are certain subjects concerning which there is a common knowledge Those subjects are matter of food for the preservation of the body, of clothing suitable for climate and temperature and of the propagation of the species Every rational human being, sooner or later, is going to know about the relation of the sexes He asked if the majority of boys and girls in the future, as they have in the past, shall come to this knowledge in a filthy, mysterious way, or if it shall be lifted to a clean, high, self respected standard He quoted Garrison to the effect that 'Talking creates zeal, zeal creates inquiry, inquiry creates opposition, opposition creates action, action creates union and union creates victory"

Dr A D Lake, Gowanda, N Y, said that the only question before us is how to improve the situation He said that we should invite the clergy, the press, and the teachers to cooperate in the consideration and discussion of this important subject If much good is to be accomplished in this direction, we must go outside of our profession and endeavor to create a public sentiment in favor of the restriction of this evil by law When the people generally more thoroughly understand and appreciate the importance of this reformation, some means will be found to bring it about Legislation is needed The power which reaches the law making source is an emphatic public demand, which will come only as the public are educated and understand its necessity If the papers on this subject, which have been read here, could be published in the newspapers, or if they could become a part of the system of hygiene taught in our public schools, then we would have begun a crusade from which good results might be expected to follow

Dr H S Pomeroy, Boston, declared that in the last thousand years civilized society has been cursed by four great physical evils Smallpox, the so-called Great White Plague, alcoholism, and the social evil The discovery of that grand master, Dr Jenner, has put smallpox back into the dark ages Within the last ten years the light has been let into the public mind in regard to the Great White Plague. When our forefathers were living it was considered a special dispensation of Divine Providence. Now, after years of fear, tuberculosis has been attacked in its stronghold, and, to-day, we are practically masters of it. In regard to alcoholism, also, the public is being slowly aroused, much is being done, a great deal more is going to be done in the next few years, and in regard to that, he said, we may report progress, thank God, and take courage In regard to the fourth of these four evils we want more light. Legislation is all very well and it does help, but there is no legislation in a country like this which is of the slightest use beyond the extent to which that legislation is incited in the first instance, and carried out and backed up afterward, by public opinion There is a little, he declared, which we, as physicians, can do toward prophylaxis directly, and toward curing these diseases, but what we can do individually in that way is a mere bagatelle compared with what can be done by the sentiment of the great American public. He believes that, as physicians, we might better discard for the next five years all our direct efforts toward prophylaxis and toward curing the disease and spend our time, our enthusiasm, our money, our efforts toward arousing a public opinion He said that he has been criticized and condemned by one of the best men who ever occupied a chair in the Harvard Medical School, because he has committed himself in one of his books to the theory that children should be taught about these things It is not a question of whether the child shall be taught or shall not be taught it is not a question of teaching or no teaching, it is not a question of safety through innocence or through ignorance It is a difficult thing to get safety through ignorance, The ignorance does not exist There will be knowledge, and if that knowledge is not scientific and pure and sensible and reverent so that the child grows up with a reverential respect for the most important organs that the Master has given him, after the central nervous system, then the child will grow up with prurient ideas, with false ideas, with ideas which will incite to physical, mental and moral decay The child has got to know He is instructed every day He is instructed by the dogs, by the cats, by the birds, in all sorts of ways, he is instructed by his comrades of the gutter He will get information He is curious, he has a right to be curious There is an insatiable demand in his mind to know about these organs, their origin, uses and destiny Something about them he will learn It will be right and it will be safe, or it will be prurient, it will be wrong It devolves largely on physicians to say what this shall be Let us lift up our voices, he said, let us use our pens, let us use our influence when we are together, when we are apart, in medical circles and in the public, in our churches, on our school committees, among our friends, in society, everywhere that we can, for a scientific, safe knowledge of these matters, to be put into the child, at least, as early as the dawn of puberty, and then, even, some of us will live to see the time when the diseases of the social evil, instead of being perhaps from 60 to 75 per cent of those wherein woman needs care, will be a very small percentage. Dr Pomeroy believes that this time will come.

THE CHEMISTRY OF THE ORGANIC SILVER COMPOUNDS *

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Believing that a knowledge of the chemistry of medicines will tend to their more intelligent use in the treatment of disease, a brief account of the chemical behavior of some of the organic silver compounds proposed for use in medicine is here presented While in recent years the country has been deluged with new organic remedies the information offered regarding them has been meager and, being almost exclusively furnished by the promoter of each new article, is not always clear and to the point. More particularly is there a dearth, especially in the English language, of systematic discussion of the many new remedies, the available literature consisting either of the incomplete statements found in books on chemistry or pharmacy, or else the rather more comprehensive treatises hastily compiled from the manufacturers' literature It is, therefore, hoped that the following, while presenting nothing new, may contribute to some extent to a better interpretation of the therapeutic effect of the many silver compounds placed before the medical profession

THE CONSTITUTION OF SILVER COMPOUNDS SIMPLE SILVER COMPOUNDS

When to a solution of silver nitrate there is added solution of sodium chlorid, or potassium chlorid, or almost any other chlorid, a white, curdy precipitate of silver chlorid is produced, a solution of any soluble iodid produces a precipitate of yellow silver iodid, addition of an albumin solution produces insoluble silver albuminate Precipitates having the same composition will be obtained if, instead of a solution of silver nitrate, one of silver sulphate or of silver acetate is used In many other ways silver salts show similar behavior regardless of the acid with which the silver is combined, and they are said to be peculiar to silver and are used to identify silver compounds This similar behavior of different silver compounds is now generally believed to be due to the

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* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Fifty seventh Annual Session, June 1906

separation (ionization) of the silver compounds, when in solution, into their constituent parts (ions) thus

Silver nitrate into silver ions and nitrate ions, or
$AgNO_3 = Ag^{\cdot} + (NO_3)'$
Silver sulphate into silver ions and sulphate ions, or
$Ag_2SO_4 = 2Ag^{\cdot} + (SO_4)''$
Silver acetate into silver ions and acetate ions, or
$AgC_2H_3O_2 = Ag^{\cdot} + (C_2H_3O_2)'$
The dots and accents are used to indicate that these parts do not exist as such but are still combined with, or attracted toward, each other

Since such solutions all contain identical silver particles or ions, it is but natural that they should show similar properties

COMPLEX SILVER COMPOUNDS

If, on the other hand, to a solution of silver nitrate considerable potassium cyanid is added, and if now to this solution a chlorid, bromid, iodid or albumin solution is added, no precipitation will occur In general, such a solution will not show the behavior characteristic of silver solutions The generally accepted explanation for this behavior is that the addition of the alkali cyanid caused the formation of another silver compound, thus $AgCN + KCN = KAg(CN)_2$, which, when dissolved in water separates (ionizes) into potassium ions and silver cyanid ions, thus $KAg(CN)_2 = K^{\cdot} + (Ag(CN)_2)'$ Since such a solution contains no silver ions it is not surprising that it fails to show the properties of ordinary silver solutions

But by appropriate tests it can be shown that such a solution containing the complex silver-cyanid ions does contain very small amounts of silver ions that the complex ion itself undergoes to a slight extent dissociation into $Ag^{\cdot}$ and $2\,(CN)'$

Many other silver compounds have been prepared which, when dissolved in water, contain the silver in complex radicles or ions, which themselves, to a slight extent, dissociated to form silver ions On this behavior of the complex silver compounds just indicated their proposed use in medicine is based Solutions of simple silver compounds, such as silver nitrate, reacting to form insoluble compounds when mixed with solutions containing chlorids or albumin bodies, both abundantly found in the body fluids, the reaction between silver and chlorid, albumin, etc, occurs at once and hence the effect of silver will only be obtained superficially and there it will act as a cauterant On the other hand, solution of complex silver compounds containing but few silver ions will be but slowly affected by the body fluids, hence they may penetrate deeper and exerting the specific action of silver compounds very gradually do not act as cauterants This slow action of such complex silver compounds can, of course, occur only if the compound is undecomposed by the body fluids, in the same way that a chlorid may be added to an ammoniacal solution of silver nitrate without causing precipitation only as long as alkalinity obtains

COLLOIDAL SILVER

When an aqueous solution of silver nitrate or other silver salts is treated with a reducing agent metallic silver is formed and being insoluble in water it separates out of the solution But, under certain conditions silver solutions may be treated with reducing agents, when no precipitate of metallic silver is formed although the reduction plainly occurs This reduction product when collected and purified is almost pure silver It differs on the one hand from metallic silver, especially in being soluble in water on the other hand its solutions fail to show many characteristics of silver solutions While a solution of this substance is readily changed so as to show the behavior of solutions of ordinary silver salts, it differs in that no precipitate is produced by albumin solutions and that in the presence of such albuminous bodies no precipitation is produced on the addition of chlorids

It is on this property that its use in medicine has been based This form of silver is commonly known as colloidal silver because it is held back by certain membranes non-permeable to non-crystalline substances, such as proteins, gums, mucilages, and generally known as colloids

As regards the chemical nature of this "colloidal silver" there is still much doubt It was pointed out that analysis shows it to be nearly pure silver, yet all attempts to obtain a preparation containing 100 per cent of silver have been unsuccessful And some investigators believe that the so-called colloidal metallic silver really is a compound containing the silver in a complex molecule and that on this account the properties of silver compounds are not shown This is especially true of a preparation known as collargolum, thus Hanriot[1] found it to contain only 87 3 per cent metallic silver and concludes that its properties were due to the presence of an organic acid (see silver lysalbinate below) which he calls collargolic acid More generally, it is accepted that in the process of manufacture the silver has been reduced to the metallic state, but that its separation as solid, insoluble silver has been prevented (postponed?) in some way The silver being in the metallic state and not in the ionic condition is, of course, not affected by chlorids, albumin, etc, just as little as a silver coin would be

Besides the colloidal metallic silver, a number of compounds of silver, such as the oxid, chlorid, carbonate, have been proposed for use in medicine in colloidal water soluble form Here, too, the true chemical condition is still in doubt It is generally held that in such substances the insoluble silver compound has been produced, but that its separation has been prevented or retarded by such bodies as albumin, gelatin, gums, etc Other investigators hold to the belief that the silver is a part of a complex molecule and hence masked Still others believe that the silver compound exists in an insoluble form, but that its precipitation is postponed indefinitely because of its fine state of subdivision and also because of the presence of the colloidal gelatin, etc

CLASSIFICATION OF ORGANIC SILVER SALTS

In the following a brief account of the many organic silver salts proposed for use in medicine is offered The discussion of each article is usually confined to two particulars, namely, the chemical composition and the chemical properties, i e, the behavior in the test tube Often the method of manufacture and the patents governing the same must be taken up in order to make clear the probable composition of the article To facilitate reference, an alphabetic classification has been adopted, and although these substances are almost exclusively known by coined names, yet it has seemed more rational to discuss them under their chemical titles, references to these being made whenever possible

Actol A trade name for silver lactate which see

Aktol A trade name for silver lactate, which see

Albargin See silver gelatose

Albargol See silver gelatose

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[1] Cr d l Acad des Sciences vol cxxxvi pp 680 1448 and vol cxxxvii p 122 also Chem Centbl 1903 vol 1 pp 1016 and 1903 vol ii p 280 and 548

Argentamine A trade name for a solution of silver nitrate in diaminoethane (ethyldiamine), see diaminoethane silver nitrate

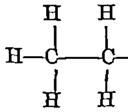
Argentol A trade name for silver oxyquinoline-sulphonate, which see

Argonin See silver caseinate

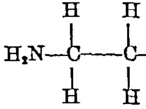
Argonin L See silver caseinate

Argyrol See silver vitellin

Diaminoethane Silver Nitrate Diaminoethane or ethyldiamine may be considered as an ammonia derivative of ethane in which two hydrogen atoms of ethane



$H{-}CH_2{-}CH_2{-}H$, CH_3CH_3 or C_2H_6 have been replaced by two ammonia residues, NH_2 thus



$H_2N{-}CH_2{-}CH_2{-}NH_2$, $CH_2(NH_2)CH_2(NH_2)$ or $C_2H_4(NH_2)_2$. Just as ammonia reacts with water to form ammonium hydroxid, $NH_3 + H_2O = NH_4OH$, so diaminoethane reacts to form a hydroxid, $C_2H_4(NH_2)_2 + 2H_2O = C_2H_4(NH_3OH)_2$, and, as might be expected, aqueous solutions of the two products, namely, ammonium hydroxid and diaminoethane hydroxid have very similar properties, thus, with silver salt both form solutions (compounds) which are not precipitated with chlorids Based on this latter property of diaminoethane, and on the property that it does not precipitate, but rather dissolves, albumin, attempts have been made to use compounds of silver and diaminoethane in medicine. Argentamine (German patent No 74 634) formerly was stated to be made by dissolving silver phosphate and diaminoethane in water The silver phosphate solution having been found to be unstable the same name is now applied to a solution obtained by dissolving 10 parts silver nitrate and 10 parts diaminoethane in 100 parts of water Chemically this may be considered as a complex silver compound, permanent only in alkaline solutions and then showing the characteristic properties of silver salts to a very limited extent and at the same time the alkaline properties of the solvent

Credé's Antiseptic See silver citrate.

Ethyldiamine Silver Nitrate See diaminoethane silver nitrate

Ichthargan See silver ichthyolate.

Ichthargol See silver ichthyolate

Itrol A trade name for silver citrate, which see.

Largin See silver protalbinate

Novargan See silver proteid.

Picratol See silver picrate.

Protargol See silver proteid.

Silberol See silver phenolsulphonate.

Silver Acetate This is the silver salt of acetic acid, $HC_2H_3O_2$ or CH_3COOH, and its composition is $AgC_2H_3O_2$ or $(CH_3COO)Ag$ Its solubility in water is much less than that of silver nitrate, in all other ways it shows the properties of simple silver salts

Silver Albuminate See silver protein

Silver Caseinate Sodium caseinate, the sodium salt of casein, is obtained by reacting on casein with sodium hydroxid solution If to such a solution silver nitrate is added and then alcohol, precipitates are obtained which have been taken to be sodium silver casein, that is, a salt in which sodium is the basic ion, while the silver is a part of the acid radicle A solution of such a compound will, of course, fail to show the reactions of silver compounds, and hence will not react with chlorids, albumins, etc, whence its use in medicine Argonin (U S patent 575 277) is a trade name applied to such a sodium silver caseinate. It is claimed to contain about 4 3 per cent. of silver, to be slowly soluble in cold water, quickly in hot water, so that a 10 per cent solution may readily be prepared which is neutral to litmus and not affected by chlorids albumin, hydrogen sulphid or alkaline sulphids Argonin L. or argonin soluble, said to be a compound of similar composition but containing 10 per cent of silver and to be readily soluble in cold water, has recently been offered for sale as an improvement on argonin Recent investigations (see silver lysingenate) seem to indicate that this and other similar compounds, which form solutions that are neutral or alkaline, contain silver compounds in colloidal condition

Silver Citrate This is known also by the coined names *Itrol* and *Credé's Antiseptic*, is the normal silver salt of citric acid, $H_3C_6H_5O_7$ and has the composition $Ag_3(C_6H_5O_7)$ It occurs as a heavy white powder, contains about 63 per cent of silver, and is almost insoluble in water, one part requiring about 3,800 parts for solution While all silver salts are rather easily reduced, usually liberating silver in the metallic state, this tendency is somewhat more pronounced because citric acid itself tends towards oxidation, and hence acts as a reducing agent, thus the salt is decomposed with separation of metallic silver when boiled with water

This ease of decomposition is also illustrated by the manner of marketing *Itrol Credé proocculis*, a very finely powdered silver citrate It is put up in opaque vials, sealed and containing only 0 5 or 1 gm of substance, and it is recommended that if the vials are opened frequently the contents remaining after two weeks should be rejected On the readiness with which silver citrate decomposes, its introduction in medicine was based It was one of the precursors of colloidal metallic silver and has largely been abandoned in favor of the latter because of its insolubility

Silver Eosolate This is said to be silver acetguaiacol trisulphonate The chemical makeup of such a salt may best be illustrated by its synthesis From guaicol, $C_6H_4(OH)(OCH_3)$, the acetguaiacol, $C_6H_4(CH_3COO)(OCH_3)$, is obtained. This is then converted by treatment with strong sulphuric acid to the acetguaiacol trisulphonic acid $C_6H(CH_3COO)(OCH_3)(SO_2OH)_3$ and from this the silver salt, $C_6H(CH_3COO)(OCH_3)(SO_2OAg)_3$ or $Ag_3(C_9H_7O_{12}S_3)$, is prepared The properties of such a compound are indicated by its composition it is a simple silver salt and should on the one hand show the characteristic silver properties, modified to a slight degree, if at all, by the acid radicle, while the acid radicle should possess the properties of a phenolsulphonate or sulphocarbolate It should here be noted that at the same time that objectionable properties, disagreeable taste, insolubility, etc., of guaiacol are removed by sulphonation, that also its medicinal effect is decreased or destroyed[2] As with sulphonates generally, we here have a water soluble, permanent salt.

Silver Ethylenediamine Salts See diaminoethane silver nitrate

Silver Gelatose Under the title albargin a silver preparation was placed on the market which was prepared (German patent No 141,967) by adding to a solution of "gelatose" a solution of silver nitrate, neutralizing and evaporating to dryness The term gelatose is used to indicate the products produced by the hydrolysis of gelatin, also known as gelatin peptone or gelatone While the claims made by the manufacturer or his agents have been vague and confusing, it appears to be a simple mixture of silver nitrate and the decomposition products of gelatin Its chemical properties are those of silver nitrate modified by the presence of the protein bodies, which, as was noted when discussing the colloidal silver compounds, have a tendency to retard or prevent the typical silver reactions

Silver Ichthyolate Compounds of ichthyol and silver have, from time to time, been proposed for use in medicine Just as ichthyol is a complex mixture, so the composition of the ichthyol silver compounds is indefinite, also, just as ichthyol largely is the ammonium salt of a mixture of acids, known as ichthyol sulphonic acid, obtained by treating the crude ichthyol oil with sulphuric acid, so the ichthyol silver compounds are, at least largely salts in which silver is the basic or positive part and the ichthyol sulphonic acid the negative part or acid radicle Several methods resulting in widely differing preparations have been proposed (German patent Nos 99,124, 112,630, 114 394) The article now on the market, ichthargan, also known as silver ichthyolate, silver ichthyol sulphonate, is a brown powder, odorless and claimed to contain 30 per cent silver and 15 per cent. sulphur in permanent combination It is readily soluble and possesses on the one hand the properties of a simple silver salt, on the other hand the properties of the ichthyol derivative It has been claimed that the process (German patent No 114 394) which rendered the salt soluble odorless and permanent also rendered the ichthyol less active or even inert[3] Under the name *Ichthargol* a silver ichthyolate at one time was offered which was insoluble in water and contained 12 per cent of metallic silver

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[2] Ther Mon, 1899 p 96 also Arch f. Exp Path and Pharm., vol 1 p 340

Silver Lactate This is known also by the coined name *Actol*, or *Aktol* It is the silver salt of lactic acid, CH_3 CHOH COOH Its composition is $AgC_3H_5O_3+H_2O$, and therefore it contains about 50 per cent of silver It is soluble in 15 parts of water Lactic acid, or 1,2 hydroxy propanoic acid, in common with other 1, 2 hydroxy acids, being readily oxidized, and the silver in silver compounds being readily reduced to the metallic state, silver lactate is a decidedly unstable salt of silver The ease with which the salt is reduced is shown by the discoloration which its solutions undergo Its use in medicine has also been based on the tendency to set free metallic silver, as when gauze, ligatures and drains are impregnated with the solution and then exposed to light, so as to cause the reduction It is one of the precursors of the colloidal metallic silver

Silver Lysalbinate C Paal[4] has prepared two new organic silver salts which promise to throw much light on the chemistry of silver compounds He has shown the formation of two bodies of weak acid character by treatment of egg albumin with dilute warm sodium hydroxid. These bodies, which he terms protalbinic acid (Protalbinsäure) and lysalbinic acid (Lysalbinsäure), are weak acids and form definite compounds with silver and other metals Silver lysalbinate he concludes to be a simple salt of silver, which has the peculiar property that when treated with alkalies, silveroxid or hydroxid is formed, but which, because of the protecting action of the protein body, remains in colloidal solution These experiments suggest the thought that many silver compounds of protein bodies which are said to contain the silver in a complex or masked combination really contain colloidal water soluble compounds of silver

Silver Nucleinate Nargol is the trade name of a compound of silver and nucleinic acid According to the patent this article is prepared from a purified nucleinic acid made from yeast fermentation residues (German patent Nos 113,164, 118 050) It is claimed to contain 10 per cent of silver, is readily soluble in water, yielding a faintly alkaline solution, which is not precipitated by chlorids or albumin What was said regarding the chemical nature of silver caseinate and silver lysalbinate applies to silver nucleinate. While generally considered to be a complex silver compound containing the silver combined with the nucleinic acid in such a way as not to show ordinary silver reaction, it is possible that instead it is a colloidal compound of silver

Silveroxyquinoline Sulphonate Under the trade name Argentol, silver oxyquinoline sulphonate, also called silver hydroxyquinoline sulphonate and silver quinaseptolate, the silver salt of the sulphonic acid derivative of oxyquinoline is sold Its formula is given as $C_9H_5N(OH)\ (SO_3Ag)$, and indicates that it contains about 32 per cent. of silver It shows the properties of a simple salt of silver, modified by the slight solubility in water and by the character of the acid radicle. This acid radicle, still retaining its phenolic hydroxyl, possesses the properties of acting as a reducing agent when in alkaline solutions, thus when the salt is boiled with water it decomposes, with liberation of silver On this reduction of the silver to the metallic state in alkaline solution the use of the argentol as a dusting powder for wounds and also as an intestinal antiseptic has been based

Silver Phenolsulphonate Under the trade name Silberol the silver salt of paraphenolsulphonic acid has been introduced, it is variously called silver phenolsulphonate, silver phenyl sulphonate, silver sulphocarbolate Its composition being $C_6H_4(OH)\ (SO_3Ag)$ or $C_6H_5O_4SAg$, it contains nearly 38 5 per cent silver It is very soluble in water, and in solution shows the properties of a simple silver salt on the one hand, on the other hand those of a phenolsulphonate or sulphocarbolate.

Silver Picrate Silver picrate, or silver trinitrophenolate, is marketed under the name Picratol Trinitrophenol or picric acid, $C_6H\ (NO_2)_3OH$, being a body of very decided acid properties, forms a well defined silver salt Its composition is $C_6H\ (NO_2)_3(OAg)+H\ O$, and it therefore contains about 30 per cent of silver It is claimed to be soluble in 50 parts of water, and, being a simple salt of silver, the solution shows all the characteristic properties of silver salts and also those of picrates

Silver Protalbinate Under the names Largin and Silver Protalbin, Lilienfeld, a silver compound has been introduced which is of the general nature of silver lysalbinate (see) and silver nucleinic (see) It is said to be obtained[5] by hydrolysis of nucleoproteids with alkalies, whereby a body soluble in alcohol and free from phosphorus (protalbin or protalbinic acid) is produced An alcoholic solution of this product on treatment with ammonium silver nitrate solution yields the silver compound largin It is said to contain 11 per cent of silver, to be soluble in 10 parts of water, yielding a slightly alkaline solution, which is not affected by chlorids or albumin The statements regarding the chemical nature of silver caseinate, silver lysingenate and silver protein (see) apply here

Silver Proteid Protargol, or protein silver salt, also known as silver protein and silver methylenealbumose, is a silver compound, obtained, according to the patents (German patent Nos 102,455, 105,866, 118,353, 118,496), by treatment of insoluble silver protein compounds with a soluble albumose. The silver protein compound is said to be obtained by treating protein bodies, such as egg albumin, serum albumin, albumoses or peptones, with silver salts The method of obtaining albumoses given depends on the treatment of egg albumin with formaldehyd, whereby a product is obtained which, dissolved in water, is not coagulated by heat Protargol is yellow powder, contains about 8 3 per cent. metallic silver and is very soluble in water No precipitation occurs on addition to the solution of albumin, chlorids or free hydrochloric acid Addition of alkali sulphids gradually causes darkening and finally formation of a precipitate

The chemical nature of this article is still in doubt It is generally stated to be a complex silver compound in which silver forms a part of the protein molecule, forming solutions which contain no silver ions and hence do not show the ordinary silver reactions On the other hand it is very possible that we are dealing with silver compounds, retained in the colloidal soluble form by the presence of the proteins

Novargan, described by the manufacturers as a proteinate of silver, appears to resemble protargol closely in composition and properties

Silver Vitellin Argyrol and silver vitellin are names applied to a silver compound of a protein resembling vitellin, obtained from serum albumin by hydrolysis It contains from 20 to 25 per cent silver and is freely soluble in water The solution is not sensibly affected by albumin, chlorids or free hydrochloric acid The statements regarding the composition of compounds containing masked silver (see silver caseinate, silver lysingenate, etc) are probably equally applicable to this compound

DISCUSSION

Dr. S Solis Cohen, Philadelphia, said that he would discuss the therapeutic aspect Physicians, he said should consider, in both the external and internal applications of the metals and metallic compounds, the probability of developing the ionic state of the element An atom set free from combination is by that very action rendered ionic or is in a nascent state It is thus prone to enter into a new combination and by reaction with the elements of the tissues produces certain definite chemical results On the other hand, when preparations are administered in which the ionic state of the metallic atom is prevented or obscured or is slow of development, certain other effects than those due to combinations of the metal with the tissue may be brought about and it has seemed to Dr Solis Cohen that this is the explanation of the therapeutic action of colloidal silver as distinguished from the salts of silver In the case of the latt tion of the salt and combination of the silver with the proteid molecule or with some atom acting as a negative ion takes place In consequence, partial destruction of the tissues ensues as when mercury or any other metal combines with the cell If enough silver enters into combination, the cell is completely destroyed, if but little combines there is a stimulation of the vital chemistry of the cell by which the damaged portion may be thrown off and regeneration occur This, he said, seems to be the way in which mercury and iodin compounds bring about the substitution of healthy for diseased tissue in syphilitic degenerations of cells and perhaps in some inflammatory sequelæ The chemistry of the masked silver compounds to which Professor Puckner referred, Dr Solis Cohen said, is to him *terra incognita* He does not know of any literature on the subject which will enlighten anyone except the expert chemist, although he has seen more or less intelligible statements of the empirical composition of most of these compounds He has seen therapeutic results, however, which show that some of these preparations at least have value altogether apart from what might be attributed to them from our knowledge of the action of the ordinary inorganic salts of silver Dr Solis Cohen said that he could not explain this, and has seen no explanation which satisfies him, for the present he is content to accept and to utilize the fact Some of these substances have bactericidal power especially as regards the gonococcus, but one of the most useful of them has little, if any, value as a germicide, yet it reduces inflammatory action and promotes absorption of chronic exudates As to the colloidal salts in general, it is quite probable that in the organism they may play the part of katalytic agents, similar in many respects to the organic enzymes The therapeutic value of colloidal silver may thus be largely due to katalytic action in taking up and again yielding oxygen, thus destroying toxins, bacteria or diseased cells—a chemical amboceptor action, to take an illustration made familiar by Ehrlich—and through such an action it may prevent or retard sepsis It certainly, he said, has a definite therapeutic action and should be employed more extensively in larger and more frequent doses than we have been using In regard to the external application of nitrate of silver Dr Solis Cohen agrees with Fraenkel that the cauterizing action is due to free nitric acid and that hence organic compounds which do not possess an acid element give us equal disintegrating, resolvent and absorbent effect, and in some instance antiseptic action also, without cauterization In many cases this is to be preferred The rules laid down by Fraenkel for the ideal silver compound are simple They are four—two positive and two negative Positively the compound should contain the largest amount of silver possible and should be soluble Negatively it should be non irritating and should not be decomposed by the tissues. There are some cases, however, in which we do wish decomposition of the agent in order to utilize the ionic effect of the metallic atom Hence there are special uses for each type of compounds described, and Puckner's classification ought to aid us in deciding which class, and which agent of the class, to use in any given case

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[3] Frankel S Arzneimittelsynthese second edit., p. 621

[4] Ber d. chem Ges vol xxxv pp 2195 2206

[5] Wien klin Wochft vol xi p 260

Dr W J Robinson, New York City, said that while we call collargol soluble silver, the adjective soluble is hardly correct It does not make a true solution, only an exceedingly fine suspension True, it is the finest suspension obtainable, but still it is a suspension and not a solution That this is not merely theory, but fact, can be positively demonstrated by the aid of the ultra microscope. A "solution" of colloidal silver in water, examined under the ultra microscope, shows the beautiful, shining particles of silver, as clear and distinct as grains of sand These can not be seen under the ordinary microscope Dr Robinson's opinion is that in acute gonorrhea the organic silver compounds are much superior to silver nitrate In fact, in the acute stage of gonorrhea, silver nitrate, he thinks, should never be used In chronic urethritis, however, silver nitrate seems to act best, and is still the remedy *par excellence* in spite of the multitude of organic compounds Dr Robinson believes that the nitric acid radical plays an important and hitherto unrecognized rôle It can not be the silver alone that acts, for there are many compounds with a large silver percentage that are much less active than other compounds with a lesser silver content Dr Porosz of Budapest had been making experiments in treating gonorrhea with very dilute solutions of nitric acid, and he claims very good results This goes to show the importance of the NO_3 radical

Dr C S N Hallberg Chicago, said that the relative percentage—amount of silver—ranges from about 10 to about 25 per cent, and he wished to know whether or not the preparations are correspondingly more potent on account of the silver percentage

Prof W A Puckner, Chicago, said that he did not attempt in any way to take up the therapeutic effect The paper is intended as a conservative statement of the present state of knowledge for physicians who may wish to consult it In reply to Professor Hallberg's query he said that the organic silver compounds vary from 5 to possibly 30 per cent of silver He has no doubt at all that their action is largely dependent on the amount of silver present The silver ion is colorless, the ions of the complex silver compounds, so far as established, are colorless Professor Puckner believes that the color of colloidal silver solutions is due to reduction processes On close inspection it gradually shows various colors as the particles aggregate, so the color is due to that In reply to Dr Robinson's comment, he said that he tried to make a conservative statement of the present theories, it is generally believed that the silver is there in solution, possibly in the metallic form

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THE INFLUENCE OF X-RAYS IN THE TREATMENT OF LEUKEMIA AND HODGKIN'S DISEASE, WITH A REPORT OF TWO CASES *

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Since the therapeutic value of *x*-rays in Hodgkin's disease and leukemia is still in the experimental stage, and requires the report of more cases which have been under careful observation and treatment for longer periods of time, in order to arrive at definite conclusions, the two following cases are submitted with their detailed histories, and results of treatment, together with an account of some experimental observations concerning the action of *x*-rays on the blood and urine in leukemia

HODGKIN'S DISEASE REPORT OF A CASE WITH A SYMPTOMATIC CURE

Patient—Mrs R. came to the medical clinic of Dr Dock, May 13, 1904, because of nodules in the sides of the neck and pain in the neck and thorax.

History—The patient's family history is negative She has had measles, scarlet fever and three attacks of "la grippe" Five years ago she noticed a mass on the left side of the neck above the clavicle. The mass was soft and puffy and movable beneath the skin It became harder in about six weeks At first there was no pain, but later she had intermittent attacks of pain of a sharp shooting character The skin over the mass became sore to the touch In the winter of 1903 she had noticed a shortness of breath at times and a sort of a catch on inspiration, so that she breathed with considerable discomfort During the three weeks before coming to the clinic she had been somewhat hoarse, and had increased difficulty in breathing at night. The patient said that other lumps or masses have appeared since the first one described The order of appearance was as follows (1) On the neck above the clavicle, (2) under left arm in axilla, (3) behind angle of the left jaw, (4) on the chest, (5) behind angle of right jaw The last four occurred within four or five weeks The patient used to weigh 160 pounds, she now weighs 139 She has a poor appetite, is habitually constipated, has no cough

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* From the Medical Clinic of Dr Dock University Hospital

Examination—Her frame was of moderate size, there was a fair amount of panniculus Musculature was small and flabby The skin was rather sallow, particularly on the abdomen Linea albicantes were present A few scratch marks were present There was slight edema of the ankles Over the thorax, enlarged superficial veins extend out to each mammary gland The cervical lymph glands were enlarged on the right side, the largest was the size of a lima bean Some of them were adherent to one another

The right submaxillary gland was negative The left submaxillary gland was the size of a robin's egg, firm and rather freely movable Above the outer end of the left clavicle there was a nodular mass movable under the skin, hard over the larger nodules, not tender on palpation The left axillary glands were enlarged, one was the size of a lima bean. The right axilla was negative Inguinal glands were negative The thorax was broad and fairly deep Expansion was small and somewhat diminished over upper left portion

Percussion There was a marked relative dullness above the left clavicle caused by the mass described above Just below the left clavicle down to the second rib, the resonance was diminished There was a prominence on the upper part of the sternum from ⅛ to ¼ inch above the surface, rounded slightly, more on the left side, due to a thickening felt under the skin Relative dullness extended over the area There was a small area of resonance between this and the heart dullness The percussion of front and sides was otherwise negative There was good vesicular breathing over front and sides Over the dull area, the inspiration and expiration were rather harsh Percussion of back was negative A few fine râles could be heard at bases on auscultation

Heart The apex could not be seen or felt. Sounds were strongest in normal area by stethoscope. There was no increase in dullness A moderately strong, clear, soft blowing systolic murmur could be heard along the edge of the sternum The liver and spleen were not palpable.

Abdomen Negative

Urine Examination of the urine was negative

Blood counts Red varied from 4,400,000 to 3,600,000, whites from 7,639 to 2,500, hemoglobin from 80 to 90 per cent

Differential counts 500 cells were made as follows

	May 7 1904 Per cent.	May 28 1904 Per cent.	May 18 1905 Per cent.
Small lymphocytes	13 6	28	21 58
Large lymphocytes	1 4	8 7	8 50
Transitional	4 4	8 3	58 8
Polynuclear	79 0	48	
Eosinophile polynuclear	1 6	7	1 72
Eosinophile mononuclear			72
Degenerate			8

Treatment—The patient was treated with *x* rays every other day over the enlarged glands, from May 6 until June 10

Course of Disease—June 10 examination showed that the swelling above the left clavicle had diminished in size Only two or three glands were adherent, the largest of these being about the size of a small almond The swelling below the left ear had disappeared Over the prominence on the upper part of the sternum, the skin was slightly red The tissue felt thickened There was no absolute dullness on percussion The area of relative dullness seemed smaller than before On the right it extended to the sternal line, dowward to the angle of Ludwig, or about 2 inches below the episternal notch, on the left to the parasternal line The glands in the left axilla could no longer be felt The patient left the hospital

July 13 The patient returned to the hospital complaining of a sense of pressure in the region of the sternum. A gland could be felt above middle of clavicle about size of a pigeon's egg The *x* rays were given every other day and arsenic (Fowler's sol) was administered internally

October, 1904 The patient was discharged, the glands having returned to normal size

Jan 1, 1905 The patient returned to the hospital because of enlarged glands under the left arm and tenderness at times under the upper sternum and in the left supraclavicular space. On examination, the left supraclavicular fossa was found to be obliterated Just above the left clavicle, there was a gland about the size of a pigeon's egg Above the middle of the right clavicle, there was a gland the size of a lima bean with one or two smaller ones High up in the left axilla, there was a gland about the size of a pigeon's egg and of a soft consistency The prominence of the skin over the manubrium sterni was much less noticeable than on previous admission There was still a thickening beneath the skin The area of relative dullness under the upper sternum had not increased in size. There was bronchial breathing over this area, both on inspiration and expiration The patient received *x* ray treatments eight minutes in length over enlarged glands and upper sternum A medium hard tube was used She received 19 treatments or a total exposure of 152 minutes She left the hospital Feb 5, 1905

May 18, 1905 After an absence of three and one-half months, the patient returned to the hospital She had been well most of the time during her absence, but in the middle of March the left side of the neck became swollen and the head could not be turned to left. She suffered great pain on swallowing, regardless of the kind or amount of food taken Hot applications, poultices and blisters were tried without effect In 3 or 4 days the swelling began to decrease in size and at the end of a week it was normal This swelling involved the region between the ear and the glands above the left clavicle and extended around to the median line in front About May 1, 1905, patient had another attack, in every way similar to the first, and lasting about the same length of time

Examination by Dr Dock showed the patient looking about the same as before

About the middle of the left clavicle there was a prominence from ¼ to ⅜ inch above surface, measuring three inches transversely and 1 1/3 inches vertically The skin over it was freely movable The mass was of a moderately firm consistence, rounded and about the size of a small hen's egg The lower border seemed to extend under the clavicle Just above the middle of the right clavicle there was a gland the size of a large white bean The prominence over the upper end of sternum was more marked than before and measured 3½ inches transversely and 2½ inches vertically The subcutaneous tissue was thickened and tender on pressure There was relative dulness corresponding to the prominence No Wintrich's change of sound could be made out Just under the left anterior axillary fold there was a gland much larger than at time of previous discharge from hospital It was the size of a hen's egg, very firm, with a small lobule on its outer side In the right axilla there was a gland just back of the pectoralis major about the size of a pigeon's egg, and freely movable Above middle of right Poupart's ligament there was a gland about the size of a pigeon's egg, which was very tender on pressure On the left side there was a gland about half as large as that on right

Dr Dock ordered *x* rays given three minutes over each enlarged gland The patient was treated with *x* rays from May 19 daily until July 26, taking in all 50 treatments, each varying from 10 to 35 minutes in length, with a hard tube, 10 inches from the anode During this time she was exposed to *x* rays 1,068 minutes

July 27 The patient was discharged from hospital, feeling well The inguinal glands were reduced in size to normal The gland in the left anterior axilla was small and hard The right axillary gland was also small and hard The masses above the middle of the left clavicle had disappeared The prominence over upper sternum had nearly disappeared, there being still a slight thickening There was no pain or difficulty in swallowing

Examination of Gland—On May 31 a small hard lymph gland was removed by incision of skin and fascia just posterior to the right sternomastoid, and was sent to Dr Warthin's laboratory for pathologic diagnosis It was found to be a Hodgkin's gland (lymphadenoma) of the D M Reed type A detailed description of the microscopic sections made by Dr Butterfield *of the pathologic department, read as follows*

The distinction between follicle and sinus is lost The abnormal elements of the lymph gland are replaced by uniformly distributed cells and a delicate reticulum The predominating cell possesses a large oval vesicular nucleus with one, or sometimes two, bright nucleoli These cells vary somewhat among themselves in size and shape The largest cells three to four times the size of the small ones The protoplasm is fairly abundant, non granular and eosin staining A few of the nuclei are hyperchromatic, but mitoses are rather rare, only two or three being encountered in a section Scattered among them is a relatively small number of lymphoid cells of the usual type

"Bordering on the reticulum, cells with large vesicular nuclei and protoplasmic processes are occasionally seen. Eosinophiles are not found in the sections examined The connective tissue fibrils forming the mesh like reticulum are delicate Coarse bands and hyaline areas are absent. The capsule of the gland is thin and between its bundles of fibers are cords of cells of the lymphoid type The periglandular fat is not infiltrated.

The predominating cell is usually regarded as being of endothelial origin and corresponds in all respects with the cells described by D M Reed, Longcope[1] and others[2] The section resembles those described by D M Reed, but differs in the absence of eosinophiles

This case is of interest owing to the enlarged lymph glands in the upper mediastinum causing difficulty in breathing and in swallowing, due to pressure exerted on the bronchi and esophagus These pressure symptoms were entirely relieved by *x*-ray treatment, which caused a decrease in the size of the glands The much enlarged superficial glands likewise were reduced in size, four different times, by application of the *x*-rays Each time the patient was discharged with her glands normal in size, but without continued *x*-ray treatment, the glands gradually increased in size again It is quite probable that the present symptomatic cure will be but temporary unless the *x*-ray treatment is continued often enough to prevent the glandular hypertrophy and hyperplasia

The blood changes also make a further observation of this case of interest Fully 10 per cent of atypical lymphocytes were found in a differential count of 500—this pointing to the possibility that we are dealing with a transition from Hodgkin's disease (lymphadenoma of the D M Reed type) to a lymphatic leukemia. The lowest leucocyte count was 2,500 and the highest 7,640 So far there has been no further increase

SPLENOMYELOGENOUS LEUKEMIA REPORT OF A CASE UNDER X RAY TREATMENT WITH CERTAIN BLOOD AND URINE FINDINGS

Patient—Mr J D came to the hospital March 3, 1905, because of a dull, heavy feeling in the pit of the stomach, belching of gas and swelling of feet and ankles

History—The family history is negative, likewise the early personal history

Present Illness—During the last three years the patient has had a distressing, heavy feeling in the pit of the stomach, accompanied by belching of gas During the past year the pain has come on daily and there has been a loss of 25 pounds in weight

Examination—Temperature 99, respiration 20, pulse 78 Present weight, stripped, 135 pounds, height, 5 ft. 8 in The man's frame was of medium size, panniculus scanty Muscles were of medium size, soft and flabby The skin was smooth, dry, elastic, pale and slightly sallow There was slight edema of the ankles, the left ankle being always swollen more than the right There were no stiff joints, lymph glands were negative Pupils were equal and reacted well Both external jugulars were distended, there was moderate pulsation from clavicles to ears

Thorax The thorax is well formed, of fair length and breadth and epigastric angle of 90 degrees Auscultation and percussion of lungs were negative.

Heart The apex was visible and palpable in fourth inter costal space, one inch outside of the parasternal line. Dullness was found to begin on the third rib, within 1 cm of apex, and to extend to the left edge of the sternum Apex sounds were clear, a soft blowing systolic murmur could be heard over the pulmonic valve, weaker over aortic The second pulmonic sound was reduplicated

Abdomen on level of ribs There was a slight fullness in the left epigastric region between the nipple line and the ensiform appendix, extending to the left sternal line.

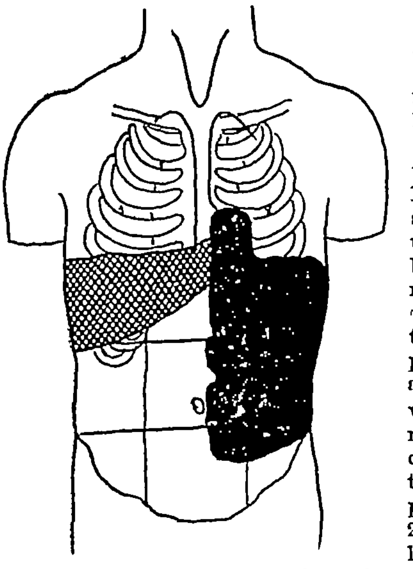
Palpation The abdominal walls were rigid, the right side was negative, the edge of the liver could not be felt. On the left side a firm hard mass could be felt extending from the costal margin, the surface was smooth, border presented a somewhat rounded edge, and the mass descended with respiration. Two notches could be felt on the anterior edge The mass extended over to the left and down to the level of the anterior spine of the ileum in the left parasternal line. This tumor extended into the left flank and could be felt almost to the midaxillary line where it became indistinct The outline is shown in diagram The splenic dullness began at the seventh intercostal space in the midaxillary line and extended straight around to the nipple line, filling Traube's space and being continuous with the dullness over the mass described above. No friction sounds could be heard on auscultation over mass

Blood count Reds, 2,500,000, whites, 135,000, hemoglobin, 70 per cent.

Differential count Small lymphocytes, 2 per cent, large lymphocytes, 0 4 per cent, transitional, 2 2 per cent., polynuclear, 42 6 per cent, eosinophile polynuclear, 0 2 per cent, eosinophile mononuclear, 0 8 per cent, myelocytes, 45 6 per cent, mast cells, 5 4 per cent, degenerates, 0 6 per cent

Diagnosis—Splenomyelogenous leukemia.

Treatment —*X* ray treatment was begun March 20, 1905 The spleen alone and later the spleen and long bones were alternately treated. A hard tube was used, and the area treated placed 10 inches from anode. Each exposure varied from 7 to 15 minutes During the course of treatment the patient was exposed to *x* rays about 2,800 minutes The leucocyte counts taken from time to time are shown in Table 1



Course of Disease—The blood condition was rapidly becoming worse at the time of patient's admission to the medical clinic of Dr Dock, the leucocyte count increasing from 135,000 to 188,000 in four days, without treatment Notwithstanding the treatment with *x*-rays, the leucocytosis increased until at the end of one month it reached a maximum of 365,000, and at the end of three months' treatment the count returned to about 135,000 again The condition did not change much for the remainder of the year, the leucocyte count during that period never failing below 100,000 per c.mm Then the count gradually diminished, falling from 146,420 to 57,320 in one month

At this time it was deemed advisable to give Fowler's solution in conjunction with the *x* rays The Fowler's solution was given for two months, starting with 5 gtt. t i d and gradually increasing until gtt 15 t.i d. were given. During this period the leucocytosis dropped from 57,320 to 4,080

The count has remained normal for over one month, no medicines being given except gr x. ferrous carbonate for the general condition. It is probable that the leucocyte count would have returned to normal without the use of arsenic, but in this case, as in other cases reported, arsenic seems to have been a valuable adjuvant to *x* ray treatment.

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[1] Longcope Bulletin Ayres Clin. Lab., Vol 1

[2] MacCallum Specificity of Endothelium" Bull. Johns Hopkins Hosp 1903, Johns Hopkins Hosp Rep, 1904

During the course of treatment, a series of differential blood counts were made at stated intervals after *x* ray exposure in order to study the immediate effects of the *x* ray on the blood The results are tabulated in Table 2

TABLE 1 —Leucocyte Table.

Date	Whites	Hbg	Date	Whites	Hbg	Date	Whites	Hbg
1905						1906		
3 10	185000	70	7 15	145150	70	2 12	101860	
3-18	168000	70	8-26	153750		2 13	152783	
3-19	184000	70	9-9	235000		2 14	178250	70
3-22	188000		9-20	285000		2 15	157870	
3 26	270000	70	10-17	244400		2-16	150240	
3-27	242000		10 22	228300		2 18	143875	
3 28	248000	65	10-31	202000	70	2-19	129840	
3-29	297000		10-31	178000		2-20	145150	
3-30	248800	70	11 27	188440		2 21	146420	
4-1	282000		12-8	140155		3 14	109500	70
4-2	282000		12 9	164230		3 15	94120	
4-3	305000	70	12-11	181000		3-21	71300	
4 5	310000		12-14	210000	72	3 22	61120	
4-6	248000		12 14	187000		3-23	57820	*
4 7	311000		12 16	176000		3-27	54750	
4 9	297000		12 17	192000		3-28	38195	
4-12	360000		12 19	192255		3-29	36925	
			1906					
4-15	363100		1 1	131000		4-4	25464	
4 16	378000		1 10	115860		4 5	16552	
4 17	365500	70	1 12	98400		4-6	17061	80
4-18	342500		1 15	99125	70	4 9	13243	
4 19	330500		1 26	165266		4 10	10443	†
4-20	294200		1 29	168170		4-11	8405	
5-1	282000		1-30	270460		4 12	8150	
5-15	274000		1 31	285230		5-16	4680	80
6-6	260000	70	2 2	140055		6-1	4800	‡
6-26	252000		2 7	124000		6-10	5220	
7 7	183000		2 10	132415				
6-28	163500		2 7	101860	71			
7 11	165380		2 11	115865				

* Fowler s sol given 5 gtt. t. i. d. 1 drop increase a day
† Fowler s solution, gtt 15 t. i d.
‡ Fowler s solution discontinued.

TABLE 2 —Results of X Ray Treatment

Date	Time	Time of Exposure	Leucocytes Total	Lymphocytes per cent.	Polynuclears per cent.	Eosinophiles per cent	Basophiles per cent.	Myelocytes per cent.	Degenerates per cent
3-27	9 a.m	8 15	244400	2 4	48 2	1	5 6	39 6	4 2
	11 a.m	15 min	282000	2.5	47 5	1 3	6.2	37 8	4 7
	1 p m		300000	2.8	48 0	5	4 0	36 2	9 0
	3 p m		296800	2.8	46 0	3	5 0	37 2	8 7
	8 p m		282000	1 5	50 0	7	6.0	35 8	6 0
3-28	9 a.m.	None.	248000	2.8	50 0	1 4	5 7	35 5	4 7
4-16	9 a m	8 3	278000	2 1	56 4	7	5 0	32.2	3 6
	11 a.m	30 min.	280000	2.6	54 8	4	3 5	32.4	6 3
	1 p m.		302000	2.5	51 2	3	4.2	34 0	7 8
	3 p m.		296000	2.6	54 6	4	4 4	31 0	7
	8 p m		*280000*	*2.8*	*53 8*	*9*	*4 7*	*32 0*	*5 4*

In Table 2 it will be seen that the exposure to *x*-rays, at one time 15 minutes and another 30 minutes, was followed by a gradual increase in the number of leucocytes which reached its maximum about 5 hours after the exposure The number of degenerates increased in one instance from 4 2 per cent to a maximum of 9 per cent and in the other from 3 6 per cent. to a maximum of 7 8 per cent Nearly all degenerates are disintegrating myelocytes, in many cases consisting only of a remaining network of fibrils The increase in the number of degenerates seems related to the general leucocyte increase after exposure

URINARY FINDINGS

The quantitative estimation of the total phosphates and earthy phosphates was carefully made, in order to determine whether or not the destructive action of the *x*-rays on the white cells and tissues caused an increased elimination of earthy phosphates As the table below shows, the quantity of earthy phosphates,is, if anything slightly diminished This may be due to the fact that the calcium salts are partly deposited in the kidney tissue, and may be the explanation of the calcification found by Warthin[8] in the kidneys of leukemic patients, treated for long periods with *x*-rays

TABLE 3 —Urinary Findings

Date	Amount in C Cm 24 hours	Gms Total Phosphates	Gms Earthy Phosphates	Albumin	Casts
3 19	800	1 60	0 32	Trace	Few granular
3-20	750	1 40	0 38	Trace	Few granular
3 21	1500	1 25	0 40	Trace.	Few granular
3 22	1250	1 8	0 29	Trace	Few granular
3-24	700	1 18	0 12	Trace	Few granular
3-25	1075	1 69	0 10	Trace	Few granular
3 27	700	1 78	0 20	Trace	None.
3-28	1000	2.3	0 40	None.	None
3 29	925	1 09	0 30	None.	None.
3 30	1175	90	0 17	None.	None.
3 31	700	1 00	0 16	None	None
4-1	870	70	0 17	None	None
4-6	1400	1 4	0 12	None.	None
4-8	925	85	0 20	None.	None
4-10	1200	1 5	0 20	None.	None.
4-14	1050	1 4	0 11	None	None
4 18	1250	1 3	0 12	None.	None.

SUMMARY

1 The beneficial therapeutic value of *x*-ray treatment in Hodgkin's disease is well demonstrated in the case reported The decrease in the glandular enlargement was comparatively rapid, but the enlargement will probably recur unless *x*-ray treatment is persisted in

2 *In the case of leukemia*, for a long time the *x*-ray treatment did not inhibit the further progress of the disease process, as is indicated by the great increase in the leucocytosis for three months after treatment was begun. After using the *x*-ray treatment systematically for over one year, the leucocyte count finally returned to normal This was not accompanied by much decrease in the splenic enlargement The use of arsenic as an adjuvant to *x*-ray treatment seemed of much benefit

3 The immediate effect of *x*-ray treatment is to increase the number of leucocytes in the general circulation This increase is accompanied by a large increase in the number of degenerate cells, most of which are disintegrating myelocytes No toxic symptoms have developed during the long course of treatment Although the leucocyte count has remained normal for a period of two months, the patient was advised to continue the use of the *x*-rays at intervals to prevent a recurrence of the blood condition

Cornwell Place

POLYCYTHEMIA *

WILLIAM ENGELBACH, M.D
AND
ORVILLE HARRY BROWN, M D
ST LOUIS

In 1892 Rendu and Widal reported the discovery of a peculiar condition characterized by the rare combination of chronic cyanosis, enlarged spleen and increased number of the erythrocytes occurring with primary tuberculosis of the spleen In 1899[1] they reported two similar strated)" He argues in support of this theory that 1 A number of cases have come to postmortem presenting no tuberculosis of the spleen 2 No other one pathologic finding of the spleen reported will explain this condition, as the findings of that organ are variable 3 In three cases the liver was found to be enlarged before the spleen 4 No other organs than the liver and spleen have been found affected which would explain the condition 5 The blood findings have shown a hyperplasia of the erythroblastic marrow, with also an accompanying hyperplasia of leucoblastic bone marrow 6 A hyperplastic condition of the erythroblastic myeloid tissue has been found in some of the cases postmortem 7 Rosengart found in one case blood cells and changes in the spleen and liver histologically (derived from hyperplastic erythroblastic myeloid tissue) The demonstration of the last two points, he thinks, has substantiated his theory that the changes in those organs (spleen, liver and bone marrow) are analogous to the changes which take place in them with hyperplasia of the leucoblastic myeloid tissue in myelogenous leukemia Turck's blood findings, however, do not correspond with the findings of other writers He found a leucocytosis and evidence of hyperplasia of the leucocytic myeloid tissue (increase of the granular leucocytes, polymorphonuclear, mast cells and myelocytes) and erythroblasts, and it is these elements which Rosengart found histologically in the spleen, that form a basis for Turck's hypothesis With the exception of Cabot's one case, however, these blood findings do not occur in the records of other men

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[8] International Clinics Vol V

* Read before the St Louis Medical Science Club

* From the Jewish Hospital Dispensary and St Louis University

[1] Rendu and Widal Splenomégalie tuberculeuse sans leucémie avec hyperglobulie et cyanose Bull Soc méd des hôp III, ser 1899 p 5-8

Reckzeh[11] believes that the stagnation of the blood is the probable cause. He says that it is an established fact that the syndrome has occurred in tuberculosis of the spleen, but it is also a fact that it has occurred in absence of tuberculosis of the spleen He reports a case of a malignant tumor of the thymus causing compression of the superior vena cava having cyanosis, enlarged spleen and polycythemia His experiments on animals confirmed his belief that compression producing stagnation of the blood was sufficient to produce the syndrome He says that diminished tonicity of the veins may result in sufficient stagnation of the blood to produce the condition Turck[13] claimed that up to the time of his article all writers were certain that the blood findings were not those of stasis Reckzeh's case, in which there was a demonstrable cause (malignant tumor of the thymus) producing a stagnation of blood might not be accepted, especially by the American writers, who have rather considered the absence of a mechanical cause as one of the positive findings Furthermore, this case showed polycythemia only in the upper part of the body which was affected by the venous obstruction, the lower part giving a blood count which would be barely above normal (4,400,000, 6,800,000) The spleen in this case was hyperemic and only slightly enlarged He had a slight degree of success in only two of his animal experiments While he produced the clinical symptoms of dyspnea, cyanosis and venous dilatation in both, the polycythemia was only 6,000,000 in one case and 6,200,000 in the other

Cabot's[6] one case presented at postmortem meningeal hemorrhage and passive hyperemia of the organs Zemlich[14] reports one case in which death took place from cerebral hemorrhage Saundby and Russell[8] reported one case showing spleen of 1440 gm , normal consistency, no tuberculosis, old mitral heart lesion, liver large and firm, 1890 gm, brain congested, arachnoid opaque, marrow of femur normal macroscopically (no histologic examination made) Russell suggests a careful examination of the suprarenal bodies in order to account for the extreme muscular weakness

Further investigation consisting of careful clinical examination including a comparative analysis of arterial, venous and capillary blood taken from different parts of the body at the same time, estimations of the viscosity of the blood, blood culture and inoculations, etc., and complete histologic examination of bone marrow, spleen, thymus, liver, adrenals and other tissues will no doubt do much to clear up the pathology of this condition Then the establishment of an anatomic basis will only open the field for more investigation on the etiologic factors producing the pathology

ANALYTIC SUMMARY OF CLINICAL FINDINGS

An analysis of twenty-five cases shows the clinical findings to be variable Common to the majority of cases are cyanosis, enlargement of the spleen, headache, vertigo, and the blood findings of polycythemia without a positive mechanical or accepted anatomic cause Diffused marked cyanosis occurred in twenty-one cases, localized or mild cyanosis occurred in three of the others Dilated venules were common to practically all clinically, and venous congestion was a common postmortem finding Enlargement of the spleen occurred in twenty-one cases, accompanied in the majority and preceded in a few by enlargement of the liver In the majority of cases the splenic enlargement was moderate and in only two was the liver enlargement excessive Localized pain and tenderness in the region of the spleen and pressure symptoms from that organ were reported in nearly all the cases Headache of a chronic and constant type was present in twenty Vertigo was noted in sixteen, and in five of these, paroxysmal attacks simulating Ménières disease occurred. Besides these symptoms, general weakness, disability and greater or less sensory disturbances were marked complaints The blood findings in general showed polycythemia or polyglobulism This increase of the erythrocytes and other elements of the blood is not confined to any localized area of the body, but is diffuse or generalized The number of red cells varied from 5,300,000 (Cominotti[5]) to 12,000,000 (Cabot[6]), average 8,500,000 to 10,000,000 These were normal with the exception of a few cases in which erythroblasts and polychromatophilic cells were reported (Turck and Cabot) The leucocytes varied from 4,000 to 31,000 In half the cases they were not increased above normal The differential count in the majority of cases was practically normal Turck found in his seven cases an increase of the granular leucocytes (polymorphonuclear 92 per cent in one case) and a decrease in the lymphocytes The latter seems to be a constant finding in a greater or less degree A few myelocytes were found in all of Turck's cases and in one by Cabot Blood platelets were found to be increased in number The hemoglobin percentage was usually markedly increased, the average was from 120 to 180 per cent Cominotti reported one case in which it varied from 70 to 80 per cent, and Rosengart one case in which it was 200 per cent Specific gravity was usually increased, varying from 1053 to 1083 Spectroscope examination, when made, showed oxyhemoglobin Reckzeh found blood serum increased one per cent in one case

Among the less common symptoms, the following have been reported Symptoms of cerebral congestion in a number of cases, edema of the brain, one case, cerebral hemorrhage, one, paraphasia, two, paralysis, two, one of which was hemifacial, neuralgia of face, two, tuberculosis of the lungs, one case, bronchitis, four, emphysema, not marked, two, dyspnea, three, edema of lungs, three The heart was frequently found enlarged, with a systolic murmur at the apex in a few cases, the second aortic sound was accentuated in some cases and there were changes in the mitral valve in one, the heart was competent in all cases Arteriosclerosis was present in four cases the pulse was not increased in frequency or arrhythmic, it was generally of high tension Blood pressure was usually increased, but was not so high as might be expected, averaging from 135 to 140 Hemorrhages were not especially frequent Epistaxes occurred in a few cases, constant oozing from gums in one case, hemorrhage (severe) after extraction of teeth, two cases, hemoptysis, one, hematemesis, two, bloody stools, one, genital hemorrhage (not occurring at labor), three, hemorrhages of skin one Among the gastrointestinal symptoms appetite was usually poor, stomach symptoms frequent, vomiting occurred in a few cases, constipation was common Genital symptoms were usually negative, but in three cases seemed to bear some definite relation to the onset of the disease The condition followed early menopause in only one case, and was associated with irregularity of menses and menorrhagia in three cases besides the one reported in this article The urinary findings were abnormal in about one-half of the cases, one case followed nephritis Albumin was present in over half of the cases in large amount in a few Albumoses are not reported Urobilin is reported present in the majority of Turck's cases and in a few others in which there was a marked involvement of the liver Indican occurred in two cases, in one in large amount The specific gravity was usually low Casts were present in some of the cases In many of the cases the urine was normal Among the symptoms of the special sense organs, the conjunctiva was injected in many cases Fundus was usually deep red, the veins were generally enlarged, dark purple and sometimes tortuous Tinnitus was not frequent. Besides cyanosis brown pigmentation of the skin occurred in some cases Tenderness of the bones was marked in a few cases Erythromelalgia occurred in the onset in one case Glands were usually not affected, but were enlarged in one case—probably specific, there was regional involvement from malignant tumor of thymus in one case The thymus was affected (postmortem) in two cases Temperature and respiration were normal in the majority of cases

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[14] Zemlich New York Med. Jour Oct 14 1905

REPORTED CASES

Author	Number of Erythrocytes	Size and Form of Erythrocytes	Normoblasts	Polychromatophiles	Number of Leucocytes	Lymphocytes	Leucocytes Mononuclear and Transitional Per cent	Polymorphonuclear Per cent	Eosinophiles Per cent.	Mast Cells Per cent.	Myelocytes Per cent	Hemoglobin Per cent
Turck 1	9,965 000	Normal		Few	83,800			90			1	140
' 2	7 500 000	Few microcytes										112
" 3	8 220 000	Many microcytes	Few		12 300	6	11	75	Not included	1 1		180
	10 625 000	Many poikilocytes	'		19 000	6	11	85		2 3		180
" 4	8 430 0 0	Few microcytes	'		20,400			80	3	1 9		25 gm†
	9 670 000	'	"		26 700			84	4	3 7		25 gm†
" 5	8 043 000	" '	"	Constant	16 500			81	Not+	Not	Few	26 gm†
	9 350 000	"	'		30,000			92	+	+		
' 6	7 701 000	" '		"	9,200			82	Not+	Not	"	20 gm†
	8 024 000	'	"	'	12 100			90	+	+	'	
" 7	9 700 000	" "	"	Few	31 500	4	6 8	87	6 8	1 4	'	19 gm†
	10 426 000	Few poikilocytes	'		36,300	4	6 8			1 4	"	
Reckzeh, 1	6,500,000	Normal			18 730				Few			125
	12,500 000				25 000							170
" 2	10 000 000				10 000	2	23	73				170
	10 800 000				10 200	2	23	75				
" 3	Above 5 400 000	"			Tumor* above 6 200	6	18	80				100
	' 7 100 000	'			15 000	6	18					
	Below 4 400.000	'			' below 5 200	6	18					
	' 6 800 000	"			" ' 12,000	6	18					
4,	10 600,000	"			11,000	4	24	75	1			120+
' 5	10 200 000	'		'	11 000							125+
Osler 1	9 952,000				4 000				1 8			120
' 2	7 172,000				21,800	14	4	79	5			120
	10,200 000				23 000							125
3	10 616 000				5 100		11	59				120
	11 692,000				5 100							
" 4	8,250 000				8 300							
Cabot, 1	9 252 000		Few		5 800	15		80	3	8	Few	110
	12 000 000		'		10 600						Few	120
' 2	10 462,000				20 000							1,07
Russe and Saundby	19,000 000	Normal			Not increased							120+
McKeen	9 380 000				9,000	18		74	2			120
	9 480 000											120
Zemlich	6 480 000				13 200	12	5	85	2 5			120+
	9,240 000											120+
Cominotti, 1	5 300 000	Few macrocytes			6 000							70
	7 500 000				3 000							80
" 2	5 500 000				7 500	477	2	40	10			60
Engelbach and Brown	8 037 000	Normal	None	Few	6 600	11	9	75	1	Few		180
	12 584 000		'	'	9 600	14	11	76	1 5			200

* Malignant tumor of thymus gland

† F Miescher s

COURSE OF DISEASE

The general course of the disease is progressively worse, with remissions of short duration The most acute case was one of three months (Turck) The average duration was from six to eight years Vaquez reports a patient living after the presence of symptoms for ten years In the case reported in this article the patient has had symptoms for eleven years and is still able to do housework except during acute exacerbations

DIAGNOSIS

A positive diagnosis is made on the findings of chronic cyanosis, enlargement of the spleen and polycythemia without an anatomic explanatory ca
may not be generalized as some pa

only on the mucous membrane Enlargement of the spleen may be slight and was entirely absent in two otherwise typical cases On account of the treatment and prognosis an effort to diagnose primary tuberculosis of the spleen should be made Reckzeh comments on the impossibility of such a diagnosis even after an exploratory incision He says that primary tuberculosis of the spleen occurs in acute cases, as reported in one case by Scharold, in which death took place in seventeen days Also that in the chronic form there may be only a gradual enlargement of the spleen without temperature or any other general or local sign upon which to base a diagnosis He further suggests caution as to exploratory operation on account of the hemorrhagic diathesis The number of erythrocytes must be increased to at least 8,000,000 per cm m (Reckzeh), and this condition of the blood must be diffuse as to body location (This limitation of the number of red cells and the distribution of the polycythemia would exclude one of Reckzeh's own cases as well as some that have been reported by other men)

Differential Diagnosis—Other conditions causing chronic cyanosis must be excluded Among these are abnormalities of development of the heart and aorta, patent foramen ovale and ductus arteriorus, stenosis of conus of pulmonary artery, imperfect ventricular septum, and congenital dilatation of aorta, organic heart disease, congenital or acquired adhesive pericarditis, aneurism, emphysema, and eccentric causes, growths, exudates, etc, causing stasis of venous circulation from pressure All other enlargements of the spleen are easily differentiated from this condition by the blood findings Enlargements, displacements and deformities of the liver due to other causes must be differentiated because in some of the cases enlargement of the liver was the first sign discovered A great many other conditions presenting abnormal increase in the number of erythrocytes must be excluded An excessive elimination of the fluids from the blood as severe diarrhea, dysentery, cholera and diabetes may show polycythemia The use of Levico-water was produced it (Donke and Ewald[5]) Any condition causing impeded circulation may cause polycythemia, as well as cyanosis Lauselt demonstrated this in organic heart disease Arsangeli first claimed that it is produced by compression Compression of bandages of an extremity has produced a slight localized polycythemia Boston says that in cases of cyanosis there is likely to be an increase in the erythrocytes in the peripheral blood In a case of anemia with cyanosis of the extremities the finger count was 4,600,000 and that of the ear 1,800,000 (This point must be considered in every blood examination) Chronic lung disease has given polycythemia as high as 9,000,000 (Toisson, Vaquez, Pelet, Krehl, A Tusti, Carnuhaci) Lues has also shown this increase in red cells (Verault, Meruer, Egger, Wolf, Koeppe, Jaruntawski, Schroeder) Addison's disease, besides having a pigmentation which may also be present in this disease, may have marked polycythemia (7,700,000, Neuman) Abnormally high red-cell count has been demonstrated in a paralyzed extremity Obesity may also have this blood finding Of the intoxications, carbon monoxid, ether anesthesia and phosphorus poisoning (Jaksch, 8,250,000) have shown increased number of red cells The polycythemia of high altitudes and early infancy is well known This condition is easily differentiated from other local and general conditions causing headache and vertigo by the presence of chronic cyanosis and the blood findings It is also easily separated from other obscure blood diseases by careful blood examination

PROGNOSIS

The prognosis is absolutely bad as to cure Nearly all cases have slowly progressed to a fatal termination

TREATMENT

The treatment has been very unsatisfactory Quinin and arsenic produced no good results (Reckzeh) Ehrlich recommends a diet containing not more than 6 mg of iron (Bunge table) Turk got good results in two cases from Fowler's solution—30 gtts daily for a prolonged period In both cases the red cells were decreased about 2,000,000 and the spleen decreased in size and symptoms subsided in one of them Nitrites and aconite have been recommended to reduce the blood pressure Osler observed the disappearance of headache after administration of the nitrites Cabot says that the use of thyroid extract for three months produced no favorable results Venesection has afforded a temporary relief, but has caused no marked change in the blood findings Vaquez and Laubry[15] noted improvement of general symptoms in one case after three *x*-ray exposures at seven-day intervals, the blood findings remaining unchanged Reckzeh reported three cases of splenectomy for isolated tuberculosis of the spleen resulting unfavorably and eight cases of isolated tuberculosis of the spleen resulting in a cure Comnotti reported two splenectomies for this condition, one resulting unfavorably from late infection (52 days after operation) One patient survived the operation, but at the end of a year's time the blood findings showed polycythemia, with no increase of the leucocytes[16]

ADDENDUM—Since this article went to press another article on Polycythemia, with special relation to the etiology of "Migraine ophthalmique" has been reported by Koster[17] He adds another case, reviews twenty-eight cases found in the literature, and gives some additional references[18]

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[15] Vaquez and Laubry Cyanose avec Splénomégalie et Polyglobulie Trib Méd. 1904 No 33.

[16] Other articles on this subject are Breuer Polycythaemie mit Splenomegalie" Mitt. d Wien. Gesellsch. f. inn Med 1903 No 16 Weintraud 'Polyglobulie und Milztumor Zeitscht. f klin. Med. vol lv p 91 Preiss 'Hyperglobulie und Milztumor Mitt. aus den Grenzgeb d Med. und Chir vol xiii Zaudy Wien klin Wochschr 1902 p 102. Schmidt, R 'Erythrozytose (Hyperglobulie) und Milztumor Münch med Wochschr 1904 p 1207 Kikuchi 'Fall von Polycythämie Prag med. Wochschr Dr Joseph Sailer reported 2 cases before Gen Med and Phys. and Surg Feb. 13 1905 Ascoli M. Riforma Medica Dec. 21 1904

[17] Münch med. Wochenschr, No 22 and 23 1906

[18] Deruschinsky Dritter Kongress russicher chirurgen in Moskau 18 21 xii 1902 Collins New York Med Record lxiv 21 1903 Frommherz Münch med. Wochenschr, No 40, 1903 Zaudy Schmidts Jahrb vol 280 No 4 1905

Differential Diagnosis of Pneumonia and Pleurisy with Effusion.—*Differentiation is sometimes very difficult, and in such* doubtful cases Kavitzky recommends Leube's sign for differentiating a cavity in the lungs from pneumothorax. Auscultation of the lungs in pneumonia reveals bronchial respiration, which is heard directly under the ear of the physician, and if the patient coughs numerous râles are to be heard simultaneously and close to the ear In pneumothorax and in pleurisy with effusion the râles sound as if they were at a great distance from the ear of the examining physician This peculiarity of auscultation is a certain sign for differentiating pneumonia from those cases of pleurisy which present the clinical picture of pneumonia, when even an exploratory puncture may not prove decisive His communication is published in the *Russky Vrach*, No 20, 1906

A STUDY OF ACUTE LEPTOMENINGITIS (*STREPTOCOCCUS PYOGENES*) *

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The present report comprises a series of human brain infections with *Streptococcus pyogenes*, together with the results of experimental inoculation of streptococci in the brains of guinea-pigs The human cases have been studied histologically with particular reference to, first, the age of the exudations, secondly, certain prominent vascular lesions, thirdly, the neuroglia reaction The guinea-pig tissues are of value mainly in the study of the exudation The work has been carried on with methods like those employed in two previous studies, on infections with *Staphylococcus pyogenes aureus*[1] and with pneumococcus [2]

We have little evidence to bring on the vexed question of the relationship of pneumococcus and streptococcus The lesions reported here differ in no constant feature from those reported by Southard and Keene in 1905 for the pneumococcus [2] The effects of the two organisms on tissues, so far as observable by the methods used, would place the organisms in one group

We are under obligations to Professors Councilman and Mallory for direction of the work, to the various members of the City Hospital and the Danvers Insane Hospital staffs, named below, for the clinical sketches, to Dr E E Tyzzer for his private case, and in particular to Drs C W Duval and P A Lewis for supplying us with cultures in the course of their pneumococcus work in 1904-5 [3]

Case 1 —G K, male, aged 35, was admitted to Dr J Orne Green's aural service at the Boston City Hospital, March 31, 1906

Clinical History—Patient had had four attacks of chills and fever in past two years Two weeks before admission there had been headache, malaise, severe pain in both ears, followed by bloody discharge two days later, and by a chill two days later Pain in vertex of skull a little to right of median line, restlessness, insomnia, vomiting Night before entrance, rigor for five minutes, followed by sweating, temperature 104 Both tympana were found perforated and remains of drum swollen Tongue was coated and tremulous Temperature rose to 103 and 105 and remained high during the day following Leucocytes 16,000, April 5 Mastoid exploration *Streptococcus pyogenes* Improvement in headache, temperature 103 April 8, temperature 105 5, leucocytes 8,000 April 10 delirium, dilatation of pupils, vomiting, hiccough April 11, muttering delirium, almost constant hiccough, fixed and dilated pupils, fibrillary tremor of neck and arm muscles, retraction and rigidity of neck Death, April 12 Arms rigid four hours before death

Autopsy Findings—The autopsy, performed 10 hours after death by Dr Fulton, gave the following head findings, with abstract of trunk findings Calvarium normal Sinuses normal Dura slightly more tense than normal Subdural space dry Convolutions flattened Scattered over the cortex are a few small yellowish opaque areas (2 to 3 mm in diameter) set, as a rule, along blood vessels of the sulci The material in these areas is tough and tenacious The largest area (about 1 cm in diameter) is on the mesial surface of the left frontal lobe. Yellowish white fibrinopurulent exudate covers optic chiasm, optic tracts near chiasm, the cranial nerves, the under surface of pons and medulla, the superior vermis of the cerebellum The exudate does not communicate with the auditory meatus The ventricles contain from 30 to 50 c.c of cloudy gray fluid and a small amount of pus in each posterior cornu. Choroid plexus is swollen and grayish There is pus in lateral recesses of fourth ventricle Mastoid operation in right ear Left middle ear contains a slight amount of serous fluid

Anatomic Diagnosis—Acute leptomeningitis, encephalitis, and ependymitis Mastoid operation (right side) Acute splenic tumor Decubitus of right buttock Echinococcus cyst of liver Slight endaortitis Chronic fibrous pleuritis

Microscopic Findings—Cultures from cortex, optic nerve, ventricles and lung gave *Streptococcus pyogenes* Cultures from heart, spleen and liver were sterile, from kidney negative

The cortex shows a deep meningeal exudate in which the phagocytic cells far outnumber the other types The distribution of cells is irregular, since in a few foci about veins there are dense groups of lymphocytes. In a very few places there are fields with polynuclear leucocytes predominating Vascular lesions are not prominent The cortical tissue shows little evidence of lesion other than a swelling of the neuroglia cell bodies of the subpial layer There is no evidence of multiplication of these cells

The acute inflammation of the lining of the ventricle is shown by a diffuse infiltration with polynuclear leucocytes and an almost universal diffuse swelling of neuroglia cell bodies The ependyma appears in places as a double or triple row of irregularly arranged cells Among the ependymal cells is an occasional leucocyte

The choroid plexus shows an exudate both within and between the folds Connective tissue cells about the vessels within the folds are swollen In places there is a dissection of the epithelial cells away from central fibrous tissue by means of polynuclear leucocytes The vacuoles of the epithelial cells are often perfectly demonstrated, even in folds packed with leucocytes Of the cells outside the epithelium, the majority are polynuclear leucocytes, mixed with desquamated epithelial cells and a limited number of cells of the phagocytic series There are few cells of the lymphocyte series

The cord shows a meningeal exudate in which polynuclear leucocytes are still numerous but are outnumbered both by phagocytic cells and by cells of the lymphocyte series In some places the lymphocytes exceeded the phagocytic cells in number Cells of the plasma cell type stand out prominently, especially when they contain two or three nuclei The phagocytic cells contain both fat and exudative cells Of the included cells, lymphocytes and plasma cells are the most prominent, but polynuclear cells are also seen, and it was not rare to find cells of all three kinds engulfed in a single phagocyte Some of the plasma cells escape inclusion and undergo a spongy vacuolation of the cell body, which remains basophilic very late, together with a swelling of nucleus and clumping of chromatin

At the points of deepest exudate the vessels have undergone extensive local lesions All three coats of the arteries may be involved, the adventitia shares in the general meningeal exudate, emigrating leucocytes may be found sometimes in the muscularis, and the intima is often lifted by exudate cells There are more polynuclear cells and deposits of fibrin about the arterial lesions than elsewhere In the walls of the veins polynuclear cells and particularly plasma cells are prominent

Case 2 —J D, male, aged 49, was admitted to Dr J Orne Green's aural service at the Boston City Hospital, May 30, 1906

Clinical History—Patient had had pneumonia at 30 There had been severe headache and a discharge from right ear for three weeks On admission ear showed slight infiltration of membrana tympani and looked convalescent There was drowsiness and severe headache Heart was enlarged to left. Arteriosclerosis May 31, pain also in back and hips, increasing stupor, followed by unconsciousness at noon Retention Bloody urine drawn by catheter Death, June 1, in coma with slight rigidity of extremities and moderate dilatation of pupils

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*From the pathologic laboratories of the Boston City and the Danvers Insane Hospitals.

*Read in the Section on Pathology and Physiology of the American Medical Association at the Fifty seventh Annual Session June 1906

[1] Southard, E E and Keene C. W "A Study of Acute Hemorrhagic Encephalitis (*Staphylococcus pyogenes aureus*) Am Jour Med Sci., March 1905

[2] Southard E. E. and Keene C W A Study of Brain Infections with the Pneumococcus THE JOURNAL vol xlvi Jan. 6 1906 p 13

[3] Duval C W and Lewis, P A. "Studies on the Pneumococcus," Jour Exper Med vol vii, No 5 August, 1905

Autopsy Findings—The autopsy, performed 54 hours after death by Dr H. C Low, gave the following head findings, including an abstract of the trunk findings

Dura is only slightly adherent to calvarium Vessels of dura are considerably injected There is no sign of thrombus in any of the sinuses and no edema Vessels of pia are considerably injected. There are few slight subpial hemorrhages over vertex. Near vertex, more especially near the posterior part, there is a fair amount of purulent secretion, and over the top of the cerebellum, between the posterior parts of the hemispheres and over nearly the whole of the base of the brain, there is considerable thick purulent exudation On the under side of the right temporal lobe is a small place nearly 1 cm in area where the cortex and meninges are adherent to the base of the skull At this point a little pus came from the brain tissue On cross section through both hemispheres at this point there is exposed in the right temporal lobe an abscess cavity about 3 x 3 x 4 cm. This is filled with thick yellow pus About this for an area of from 1 to 2 cm the brain tissue is soft and reddish and numerous dark red points fill nearly the whole of the rest of this lobe No other abscesses are found in the brain tissue. In the ventricles there is a fair amount of thick purulent secretion which covers the choroid plexus

Both middle ears are normal The point where the brain and meninges are adherent to the skull is near the center of the right middle fossa just anterior to the eminence of the semicircular canals, and on chiseling away the bone from here, pus is found to be in some of the bone spaces Just posterior to this, but a little more to the side, for nearly over the entire end of the external canal there is a slight amount of pus in the bone spaces Mastoid cells have been scraped out in operation Mastoid cells anterior to field of operation do not appear to be subject to any suppurative process

Anatomic Diagnoses—Acute leptomeningitis and ependymitis Abscess of right temporal lobe. Suppurative osteitis of petrous portion of right temporal bone Mastoid operation Acute hemorrhagic cystitis Healed pulmonary tuberculosis with localized tuberculous pleuritis Chronic fibrous pleuritis Slight chronic interstitial nephritis Hypertrophy and dilatation of heart. Slight area of fatty change in mitral valve

Microscopic Findings—Culture from lateral ventricle gave *Streptococcus pyogenes* The brain abscess contained a variety of organisms Cultures from heart's blood, spleen, liver and kidney were sterile.

The histologic changes in the cortex are chiefly related to the underlying abscess The meningeal exudate is slight and composed of mononuclear cells, mixed with a few polynuclear leucocytes The mononuclear cells, as a rule, approach the plasma cell type Compressed plasma cells sometimes occur singly or in pairs in the walls of small vessels in the nerve-cell layers of the cortex. For the most part there is very little sign of exudate in the deeper layers The cells about the smaller vessels near the abscess are swollen and increased in number Cells in apposition with the vessel walls are occasionally seen in mitosis The nerve cells have undergone a variety of changes which are chiefly the product of edema—swelling and vacuolation, shrinkage and chromophilia, extrusion of nucleolus The satellite cells occur often in groups of eight or ten, about the small pyramidal nerve cells which are themselves as a rule in some degree altered. The satellite cells fail to show well-defined cell bodies or any sign of inclusions There seems to be evidence that nerve cells may occasionally disappear from the midst of satellite cell groups No mitoses were observed among the satellite cells in this case Near the abscess there are a few nuclear figures in large cells, some of which had numerous vacuoles in their cell bodies outside the spindles It is doubtful whether these figures occur in endothelial or neuroglia cells There is little evidence of cell cavity In the areas of frank hemorrhage here and there is a phagocytic cell containing blood globules

The lining of the ventricle is macerated There is rarely any evidence of proliferation in the lining cells In places the wall is supplanted by masses of fibrin containing exudative cells The vessels of the underlying tissue are dilated, sometimes to an unusual degree, and the sheaths of the veins are filled with cells of the lymphocyte series, including many examples of the plasma cell Mitotic figures are scattered at rare intervals through the edematous tissue underlying stripped portions of the ventricular lining One skein form was found in a highly vacuolated cell which lay free in a collection of blood globules Otherwise the tissue shows merely degeneration or necrosis In some cases the small cells near the nerve cells share their chromophilia, but in other cases the small cells appear to stain densely at a stage when the nerve cells are still fairly well preserved The tissue under the ventricle appears to have been more directly subject to injury than the tissues about the subcortical abscess, so that there is here more sign of degeneration than of the cell proliferation seen about the abscess

CASE 3—R. R., male, aged 53, was admitted to the service of Dr A L Mason at the Boston City Hospital, April 21, 1901

Clinical History—Patient had been in bed three weeks before admission, malaise, weakness, headache, dizziness On admission cheeks were flushed, slight left internal strabismus, pupils small, otherwise all signs were negative The day after admission temperature rose to 102, patient became restless and noisy and tremor of extremities set in April 24, ascites, dribbling of urine, mild delirium, Cheyne-Stokes respiration. April 26, incontinence of feces, rigidity of neck. April 29, patient unconscious and quiet, respiration rapid and superficial Death

Autopsy—The autopsy, performed by Dr E E Southard twenty hours after death, showed

Head Calvarium and dura normal Longitudinal sinus filled with dark fluid blood Subdural space shows marked increase of fluid, probably 300 c.c leaks away Pial vessels injected, pia over sulci opaque and tense from contained fluid There is considerable web-like, thinly spread opaque connective tissue in basilar region, especially around optic chiasm and in Sylvian fossæ Brain substance is very soft, corpus callosum like Neufchatel cheese All tissues are moist. Puncta cruenta distinct on section of centrum semiovale. There is about a test tubeful of clear fluid in each lateral ventricle

Cord Much clear fluid under tense dura Cord tissue is firm and well shaped, but over all is a thin, glistening, opaque-white deposit, slightly more marked in lumbar region Foramen of Magendie and accessory foramina are occluded by this overgrowth Middle ears normal

Anatomic Diagnoses—Basilar and spinal organizing meningitis Internal hydrocephalus Increase of subdural fluid Edema of brain Fatty degeneration of heart muscle Slight fatty degeneration of renal epithelium Congestion of spleen, liver, kidney, pancreas, bladder mucosa Chronic pharyngitis Hypostatic pneumonia Chronic adhesive pleuritis Chronic perisplenitis Chronic interstitial orchitis

Microscopic Findings—Cultures from heart's blood and lung showed *Streptococcus pyogenes* and many other organisms The liver showed *B coli* The tissues at the base show considerable variety in exudate The looser tissues contain fibrin and polynuclear leucocytes, which outnumber the other kinds of cell The adventitiæ of the vessels contain numerous cells of the lymphocyte series

Intimal lesions, although prominent in arteries of smaller caliber, spare the larger arteries The intimæ of the smaller arteries are lifted or completely dissected off by an exudate composed chiefly of cells of the lymphocyte series, among which are examples of the typical plasma cell Between the loosened intima and the elastic layer of the artery there may be deposited a dense deeply stained sheet of fibrin In late stages of the lesion when the intima has sealed off, the appearances simulate a fibrinous transformation of the intima The smaller vessels are often wholly blocked by masses of fibrin and desquamated cells The nerve tissue beneath the exudate is edematous and shows nerve cells in various stages of injury, retaining, as a rule, well staining nuclei Single leucocytes invade the pons tissue for several millimeters There are a few narrow marginal areas of nerve tissue replaced by fibrin and leucocytes The cord shows an exudate of cells of the lymphocyte series and well developed vascular lesions resembling those at the base of the brain

Case 4 —H W, male, aged 31, was admitted to the service of Dr Henry Jackson at the Boston City Hospital, July 30, 1903

Clinical History —There had been persistent emesis without gastric pain or distress, three weeks Dizziness, frontal headache, blurring of vision, swelling of feet and ankles, slight cough with expectoration Stopped work two days before admission. Urine contained albumin and casts Diagnosis, chronic interstitial nephritis Discharged four days after admission. Readmitted Sept. 10, 1903 Heart enlarged, soft systolic murmur at apex transmitted to axilla. Heart and kidney signs grew gradually worse. Mind not clear Oct 14, 1903, erysipelas set in, developed rapidly to sloughing of eyelids with severe chills Death Oct. 15, 1903

Autopsy Findings —The autopsy, performed five hours after death by Drs R. E Lee and E. E Southard, showed

Head (Dr E E Southard) Scalp is everywhere edematous, ranging from 2 to 3 cm in thickness Tissues over frontal eminence and orbits are brawny and hard to turn back. Calvarium of normal thickness, without diploë. Dura of normal tenseness and thickness Moderate injection of middle meningeal system. Sinuses filled with fluid blood and cruor clot Meshes of pia distended with cloudy (fibrinous) fluid, without cellular exudate. Arachnoidal villi moderately well developed. Substance moist. Ventricles showed no increase of fluid. Interbrain, midbrain and bulb normal Vessels at base normal

Middle Ears Right normal Left contains greenish fluid pus with streptococci Ethmoid cells normal Orbital tissues are infiltrated with greenish pus containing streptococci Eyes removed from behind show fairly clear conjunctivæ, with impression of opacity behind, especially marked in left eye.

Anatomic Diagnoses — Chronic diffuse nephritis Hypertrophy of heart. Slight fatty myocarditis Erysipelas of face. Acute purulent conjunctivitis Edema of pia and of substance of brain. Acute otitis media (*streptococcus*) Purulent infiltration of orbits (*streptococcus*) Slight bronchopneumonia. Chronic obliterative pleuritis (left) Fatty liver Edema of glottis Hydrothorax.

Microscopic Findings —The exudate into the pial tissues consists of slight edema with exudative cells almost invariably mononuclear, mainly lymphocytes There is an occasional polynuclear leucocyte The only signs which can be connected probably with the septicemia are in some of the small arteries These show desquamation of endothelium, with dense fibrin deposits on the elastica The elastica in these arteries, which are in certain cases entirely plugged by leucocytic thrombi, fail to contract in the usual wave form, but remain smooth and flat There is no considerable neuroglia reaction in the subpial layer or elsewhere.

Case 5 —J B, male, aged 19, was admitted to Dr G A Leland's service at the Boston City Hospital, Dec. 30, 1903

Clinical History — Patient had had measles as a child. There had been discharge from right ear for six years, with occasional attacks of pain and fever External abscess once opened by family physician Two weeks before admission a similar attack was followed by severe, continuous, generalized headache Temperature 102 two days before entrance. Pain localized in occipital region, radiating to interscapular region Neck rigid. Leucocytes, 24,000 Right mastoid operation (Dr Leland) Temperature dropped to 100 Leucocytes, 16,000 Slight rotary nystagmus, more marked in right eye. January 1 Right facial paralysis January 3 Pupils dilated, right more than left, fundus examination showed haze of both discs with congestion of lamina cribrosa and venous engorgement Vomiting Restlessness Second operation by Dr Leland, exploration of cerebellum Apparent improvement. Vomited once Pain in occiput allayed by morphia Wound dressed under primary ether, January 5 Afterward delirious, crying with pain in head Morphia Delirium once more followed by coma, morning of January 6, respirations 6 to 8, pulse not countable and intermittent. Death

Autopsy Findings —Examination, limited to the head, made by Dr E E. Southard 2¼ hours after death, showed scalp veins filled with fluid blood. Tissues adjacent to lips of wound gray and chocolate brown, edematous and friable The necrosis involves the mastoid insertions of the right sternomastoid, splenius capitis, and trachelomastoid muscles, head drawn forcibly to the left Rigor absent. Tissues warm

Calvarium thin, rarely reaching 5 cm. Right temporal bone removed intact by sawing shows thumb-sized cavity of the mastoid exenteration and perforations made for exploration of posterior fossa cerebri (cerebellum and temporosphenoidal lobe)

Dura of the usual thickness, lightly adherent opposite bregma, can not be picked up readily with forceps Small perforations are found in outer portion of right posterior fossa cerebri. Localized on dura covering posterior surface of petrous portion of temporal bone, involving meatus internus and aqueductus vestibuli, is a layer, .2 to 4 cm deep, of granulation tissue with thick fibrinous greenish gray pus Sinuses contain fluid blood. Tissues about right superior petrosal sinus soaked in pus

Pia shows moderate injection, chiefly of the large veins of sulci, over vertex and sides Meshes of pia under interbrain floor are filled with tenacious greenish pus which follows both Sylvian arteries for a few centimeters into fossæ Sylvii and follows anterior choroid arteries for some distance. Optic nerves are held in edematous purulent fibrous tissue, nerves look redder than usual on section Slender processes of fibrin containing pus enclose anterior communicating and anterior cerebral arteries, leaves of pia in this region are somewhat firmly united. Pituitary not grossly involved Pia over pons is distended with plastic layer of greenish pus Considerable clear fluid is found between pia and dura Pia over cerebellum contains no pus except immediately over abscesses, but the subdural space of the right posterior fossa contains considerable purulent fluid

Ventricles The posterior horns of both lateral ventricles, the anterior horn of right lateral ventricle and floor of third ventricle contain slight plastic deposits of greenish pus and fibrin, apparently settled out of a considerable surplus of turbid brownish fluid distending the cavities The ependyma of the ventricles is swollen, deeply velvety and peels away in a clinging layer 1 to .2 cm thick Fourth ventricle is lined with what resembles an early pyogenic membrane, which can be peeled away readily, leaving an edematous ependyma with deep red punctation.

Substance Sulci of hemispheres are almost effaced Substance is moist Very little injection either of cortical or of central ganglionic vascular systems The substance of the right cerebellar hemisphere external to flocculus contains a greenish abscess cavity 2 x 2 cm across, of an indefinite depth The edema and a slightly greenish color invade the dentate nucleus playing out vaguely Injected tracks of director (used for exploration) are found in cerebellum and temporosphenoidal lobe. The abscess is just missed by the exploration Interbrain, midbrain, and isthmus are normal on section Weight (minus considerable fluid) 1490 gm

Anatomic Diagnoses —Mastoid operation Exploration of cerebellum and temporosphenoidal lobe Chronic otitis media Abscess of cerebellum Acute fibrinopurulent basal leptomeningitis Pyocephalus internus. Edema of substance with flattening of gyri

Microscopic Findings —Culture from brain showed streptococci

The cortical meninges at the vertex show a thin layer of large mononuclear cells of the phagocytic type. One of these occasionally contains a polynuclear leucocyte

At the base the exudate is often 3 to 4 mm thick and varies according to its relation with vessels The free exudate shows numerous cells of the phagocytic series, together with polynuclear leucocytes and cells of the lymphocyte series in about equal numbers The adventitiæ of the veins contain chiefly cells of the lymphocyte series The tissue at the base is the only region examined in this case which shows marked lymphocyte infiltration

The cerebellum shows an exudate which is deepest in the sulci between the outermost laminæ and beneath the superficial pia mater. There is focal invasion of the molecular layer by leucocytes, either singly or in very small groups, but, beyond there, there is no evidence of either gross or selective injury to the nerve tissue. The exudate shows polynuclear leucocytes very prominently, but counting shows that they rarely exceeded the mononuclear exudative cells in number. Of these mononuclear cells the most prominent are large cells with eccentric vesicular nuclei, which are phagocytic for polynuclear leucocytes. About a few small veins are collections of cells of the lymphocyte series, for these cells the larger mononuclear cells fail to be phagocytic, save in rare instances.

The choroid plexus shows numerous cystic spaces about the larger vessels. The spaces contain granular material and numerous corpora amylacea. The acute inflammatory reaction fails to involve the central regions of the plexus, but is strikingly shown immediately below the ependyma in many folds. The deepest exudate occurs at the tips of certain folds, where the polynuclear leucocytes sometimes accumulate in masses and dissect off the epithelium. Numerous folds are wholly spared from exudate. It is not possible to give a reason for the variations shown. As a rule the epithelium is well preserved and shows many of its characteristic vacuoles. An occasional leucocyte is caught in emigration between the epithelial cells. Cells of the lymphocyte series are almost never in evidence. Between the folds there is considerable granular material with polynuclear and desquamated ependymal cells.

The floor of the fourth ventricle fails to show the pyogenic membrane suggested in the gross. The gross appearance was produced by an extensive local acute infiltration and formation of fibrin which permitted stripping off the superficial gray matter in a single mass. The fibrin collects particularly in the walls of small vessels, many of which are no longer pervious. The most prominent cells in the subependymal tissue are polynuclear leucocytes, some of which approach closely or seem to bury themselves in dying nerve cells. The neuroglia reaction does not go beyond swelling and process formation in the cell bodies.

At the edge of the abscess the intima of the arteries is raised by polynuclear leucocytes and may be stripped away. The large vessels remain pervious, it is probable that the smaller vessels become blocked at their origins. The abscess contains considerable fibrin. The polynuclear leucocytes far outnumber the mononuclear cells which are chiefly of the type with vesicular nuclei. The mononuclear cells in the free exudate are not very often phagocytic. The optic nerve shows edema and exudate of polynuclear leucocytes, together with a few phagocytic cells, in both the subarachnoid and subdural spaces.

CASE 6.—C. W., a male, aged 52, was admitted to the service of Dr. J. L. Ames at the Boston City Hospital, Jan. 21, 1904.

Clinical History.—Gonorrhea at twenty-seven. Rheumatism for ten years. Heavy drinker. Little alcohol for four days. The day before entrance fell while riding on car platform, procured one drink of whisky, lost consciousness and was brought to hospital. On admission dull, tremulous. Showed systolic murmur at apex transmitted to axilla and systolic whiff in arteries. Arteriosclerosis. Reflexes normal. Delirium with motor excitement set in but was replaced later with prostration. Slight nystagmus and deviation of eyes to right, pupils equal, reacting to light. Pulse rose to 160, respiration to 60, temperature to 105. Some spasticity of arms and legs. Râles appeared over both chests. Death, Sept. 26, 1904.

Autopsy Findings.—The autopsy, performed four hours after death by Drs. R. L. Thompson and N. H. Gifford showed:

Head. Hair black and fairly thick. Scalp normal. Calvarium thin. Dura adherent to calvarium. Sinuses contain cruor clot. Arachnoidal villi are fairly well marked. Meshes of pia contain over 50 c.c. cloudy, greenish yellow, fairly thin fluid. Greenish and yellowish white, fine and coarse threadlike markings along pial sulci. Both small and large vessels are moderately congested. Vessels of circle of Willis show slight diffuse thickening. Convolutions are well rounded and of fairly soft consistence with slightly congested vessels. Ventricles contain a few c.c. clear and pale yellow fluid. Cysts (1 to 3 mm. in diameter) stud choroid plexuses of both lateral ventricles. Pons and medulla of reduced consistence. Substance on section shows nothing remarkable.

Spinal cord. Fluid turbid. Pia thick and greenish yellow. Cord soft.

Anatomic Diagnoses.—Acute leptomeningitis and encephalitis. Acute bronchitis. Edema and congestion of lungs. Chronic mitral endocarditis. General arteriosclerosis. Chronic splenitis. Chronic fibrous pleuritis. Chronic fibrous pericarditis. Chronic external pachymeningitis. Apical scar of left lung. Cysts of choroid plexus.

Microscopic Findings.—Cultures from heart's blood, lung and brain showed pure *Streptococcus pyogenes*, from liver, spleen and kidney, *Streptococcus pyogenes* and *B. coli*.

The cortical meninges are edematous and contain an exudate of polynuclear leucocytes which enclose numerous pairs of streptococci. Numerous chains of streptococci lie free in the granular material deposited in the pial meshes. Large phagocytic cells are rare. Single polynuclear leucocytes are found at rare intervals imbedded in the intima of the arteries, mononuclear cells are still rarer in this locus.

The severest lesion in this case affects the large sulcal veins, whose walls may be distended with polynuclear leucocytes outnumbering the original cells making up the wall. In the neighborhood of the injured veins there is an accumulation of large mononuclear cells, but these fail to be phagocytic in many cases, either for polynuclear leucocytes or for bacteria. Next to the severely injured veins, the larger arteries also exhibit the deepest infiltration of the intima with polynuclear leucocytes. The spinal meninges show an early exudate with few large phagocytes. Vascular lesions were not prominent in the blocks examined.

CASE 7.—L. H., a girl baby, born Dec. 25, 1904.

Clinical History.—Breast fed, had a cold at five weeks, but rapidly got well of it. The mother had sore throat, pain in back and legs, and fever when her child was about seven weeks old, the child at this time showed nothing but slight distension of the abdomen. A temperature of 104 appeared Feb. 23, 1905, throat and chest were negative. Admitted to Massachusetts Infants' Asylum with pulse 136, temperature 103, weight 5,000 gm. There was a slight red area on the left leg, attributed by the mother to a burn. The next day this red area had spread, the knee swelled, the head was held retracted. February 25, the whole left leg was swollen and tender but without increase of temperature, respiration shallow and grunting. The body temperature was maintained above 101. The leg improved, the morning of February 28, jaundice and convulsions appeared, general twitching, legs flexed, arms flexed across chest. The throat became filled with mucus. The chest showed râles, probably transmitted. March 1 the jaundice had increased, the head was held retracted, there was an occasional general twitching. The child vomited and failed to take food well. The eyes were fixed, the pupils dilated and sluggish. Death at midnight.

Autopsy Findings.—Examination 12 hours after death by Dr. E. E. Tyzzer showed: Murky limpid fluid beneath dura. Pial meshes contain murky bile-stained exudate. Exudate thick over cerebellum, thinner over cord. Murky bile-stained fluid exudate in ventricles.

Anatomic Diagnoses.—Acute cerebrospinal meningitis (*Stereptococcus*). Septicemia. Icterus (gall bladder and ducts normal).

Microscopic Findings.—Cultures showed *Streptococcus pyogenes* pure in heart's blood and liver, mixed with a *Staphylococcus* in spleen.

Cortex Cerebri. The meshes of the *pia mater* are distended with cells, of which the large mononuclear cells greatly outnumber the rest. The large mononuclear cells are phagocytic for numerous pairs and chains of streptococci. The inclusion of other exudative cells is frequent, but by no means so prominent as the bacterial phagocytosis. Large phagocytes of an omnivorous character are found, with vacuoles containing fat, mononuclear cells, polynuclear leucocytes and bacteria. Polynuclear leucocytes are frequent, but *tend to show signs of degeneration.* Cells which can be identified as belonging to the lymphocyte series are not frequent A few cells of the plasma cell type, occasionally with two nuclei, lie in the adventitiæ of the vessels

Cerebellum The exudate varies in character, but shows everywhere a certain number of polynuclear leucocytes Colonies and chains of streptococci abound in the superficial pia mater, and as a rule are enclosed within cells, both within polynuclear leucocytes and within large phagocytic cells The bacteria seem to pass through an eosin staining stage before complete digestion Except in the deepest places of the exudate opposite the mouths of the sulci, the polynuclear leucocytes are outnumbered by the large phagocytic cells It is not infrequent to find cells phagocytic for polynuclear leucocytes which are themselves phagocytic for bacteria In the sulci the connective tissues are packed with large vacuolated cells which accommodate themselves readily to changes of shape in the spaces they occupy There are a few cells of the lymphocytic series, often with vesicular nuclei or with chromatin not murally arranged, but cells of the finished plasma cell type are rare

Spinal Cord The large phagocytes containing several kinds of cells and bacteria are prominent in the looser tissues The adventitiæ of the vessels contain also a moderate number of cells of the lymphocyte series The arteries show intima occasionally lifted by edema, with rarely an exudative cell beneath

Case 8—C H, a hydrocephalic imbecile, aged 45, entered Dr H. W Mitchell's service at the Danvers Insane Hospital Oct. 13, 1905, and died Jan 24, 1906

Clinical History—Dull at school "Always ailing" Never could earn his living Became vagrant several weeks before admission. Impairment of memory Romberg sign absent Gait fairly steady Coarse tremor of fingers Left pupil slightly irregular and without reaction. Knee jerks lively Achilles reflexes brisk, with slight clonus Plantars present. Spurious clonus of both ankles Arm reflexes lively Movements slow and listless No spontaneous conversation. Memory poor Limitation in range of thought. Lack of ideation Fainting spell two weeks before death Decubitus Pneumonic area in right lung Death

Autopsy—Autopsy, performed by Dr E E Southard, showed

Head Hair is gray and thin Scalp strips readily Calvarium thin, without diploë Dura not adherent to calvarium Dura distended Sinuses contain liquid blood Arachnoidal villi in moderate amount Dura strips readily from pia except over ascending frontal gyri, where, particularly on the left side, the dura and pia are gummed together by a plastic stringy yellowish gray exudate, covering an area on each side scarcely larger than a dollar and thinning out gradually at edges There is no gross connection between this exudate and the otitis media of the right side Except at the vertex, the pia mater is without exudate or edema and shows a few fibrous streaks over sulcal veins The substance of the brain, cerebellum, interbrain, pons and bulb, exclusive of fluid contained in the ventricles, weighs 960 gm The fluid withdrawn from the ventricles measures 1,300 c.c The sulcation of the brain is rich but chiefly superficial and gives the impression of an alligator skin bag The pia strips readily from the substance. Many of the sulci run inward for a few millimeters and bend at right angles, assuming a position concentric with the hemisphere surface for a few millimeters It is not possible to homologize the sulci found with the sulci of the normal brain The Sylvian fossa is the sole landmark on the flank of the hemisphere Incision of the ventricles and withdrawal of the contained clear liquid show basal structures of a normal appearance, but almost total absence of callosal and fornix tissue The walls of the ventricles are thinnest above and thickest below and behind. At the vertex the cortex and underlying white matter *measure in places no more than 1 5 cm* The walls of the ventricles are of smooth and normal appearance The cerebellum is of normal appearance and consistence Lower structures are grossly normal Right middle ear contains semi liquid yellowish green pus communicating with a cavity 1 5 cm in diameter, in the mastoid process

Anatomic Diagnoses—Purulent otitis media dextra Localized purulent leptomeningitis (vertex) Congenital internal hydrocephalus, with atrophy of corpus callosum and fornix and with microgyria and thinning of cortical substance. Absence of diploë Slight aortic sclerosis Apical scar of left lung Edema and congestion of posterior parts of lungs. Cholelithiasis

Microscopic Findings—Culture from left middle ear shows *Streptococcus pyogenes*

Cortex Cerebri Phosphotungstic hematein section shows diffuse loose meshed neuroglia tissue with delicate isolated fibrils running in all directions In the cell layers of the cortex the fibrils are curly, but run, as a rule, radially Just below the pia, they begin to run tangentially and unite in a thin, dense mat The deposit is thickest at the bottom of the sulcus, and there are sometimes projections of glia into the pial tissues in this situation, recalling the picture of *Randsklerose* Some of the cells of the subpial region show two or three centrosome like bodies in a light space in the cell body The gliosis is remarkably even and delicate and is not markedly perivascular

Cortex with Exudate (Frontal Region) Hemorrhage, with numerous polynuclear leucocytes and mononuclear cells in about equal proportions Many of the mononuclear cells are phagocytic for polynuclear leucocytes

The neuroglia cells beneath the pia have swollen bodies, some have two or three nuclei

Cortex from Various Regions of Right Hemisphere (Nissl Stain) Superior frontal, ascending frontal, ascending parietal, paracentral, calcarine, limbic, gyrus rectus, show unusual cell pictures characterized by an unusual relative cell richness suggesting the pictures presented by the cortex of lower animals The richest cell picture is derived from the calcarine area Right Ammon's Horn (eosin methylene blue, phosphotungstic acid hematein) shows a thin superficial fibrillary gliosis with delicate even fibrils, and centrally a regular rich feltwork of even delicate fibrils with some stouter ones

Choroid Plexus Numerous concentrically layered bodies, Villi few Vacuoles few

Caudate Nucleus Nerve cells as wide apart as usual The ventricle wall shows flattened cells having basal corpuscles (phosphotungstic acid hematein) but, as a rule, no cilia. There are no elevations like those in more acute internal hydrocephalus

Cerebellum Centrum album gyrorum apt to be slender

Cord Nissl sections show an occasional eccentric nucleus in anterior horn cells at several levels Phosphotungstic acid hematein demonstrates no excess of neuroglia

The striking point exhibited by this case is the reaction of the neuroglia to the acute leptomeningitis This reaction is a cellular gliosis resembling in every detail the cellular gliosis of the normal adult brain Although the case showed very slight resistance to the streptococcus infection of the middle ear, yet the cells of the meninges showed phagocytic tendencies resembling those of the normal adult meninges, and, so far as demonstrable, the polynuclear leucocytic exudate was in the process of clearing up by the mononuclear cells

Case 9—J O, a woman, aged 40, entered Dr F R. Sims' service at the Danvers Insane Hospital April 4, and died April 9, 1906

Clinical History—Headache, violence, delusions of persecution, incoherence, four days before entrance Nursing child thirteen months old. Herpes of lips, skin lesions probably due to chafing, constant listlessness Lay on right side with head retracted and drawn to left and eyes turned up and to the left. Gait tottering, with feet held wide apart General tremor Knee-jerks apparent Babinski reflex doubtful Limbs held rigid Pupils widely dilated Resistive, distractable, disoriented Fever 103 Signs of pneumonia in right lung set in three days after admission Death

Autopsy—Autopsy, performed by Dr E F Southard, showed

Head Hair dark Scalp normal Calvarium thick, with abundant diploë Two emissary vein foramina in parietal bones Dura lightly adherent to calvarium in bregmatic region Dura tense, not markedly injected Sinuses contain liquid or freshly clotted blood Superficial cerebral veins deeply injected Dura and pia inter adherent [illegible] arachnoidal villi through yellowish, very [illegible] superficial injection of vessels everywhere, but very little congestion of veins except at vertex. Pia externally smooth and only slightly moister than usual. The sulci and gyral surfaces are in a few regions filled with yellowish fibrinous pus the upper two thirds of both fissures of Rolando, the upper thirds of both ascending parietal gyri and, to a less extent, the upper thirds of both ascending frontal gyri, both superior parietal lobules, both fossæ of Sylvius. The circle of Willis is wholly concealed by fibrinous pus The cisternæ of the base are filled with cloudy liquid. The middle two-thirds of the basilar artery is covered with fibrinous pus The loci of origin of the fifth nerves are marked by masses of pus The pia over culmen monticuli is swollen to a depth of 5 cm with pus The great horizontal fissure of cerebellum contains stringy yellowish pus

Brain weight, 1,310 gm. Gyri a trifle flatter than normal. Substance everywhere equally reduced in consistence. The olives are no harder on palpation than the remainder of the medulla. Cerebellum softer relatively than cerebrum, softest in vermis which in places is almost diffluent. The line of Gennari in the cerebrum is hard to make out. There is no focal difference in consistence in the cerebrum, even in the areas of most marked suppuration

Ventricles contain a normal or only triflingly increased amount of fluid which is cloudy At the tip of each posterior cornu is a small mass of fibrinous pus There is no pus in third or fourth ventricles

Cord On incision of the lumbar dura, considerable cloudy liquid flows out under slightly increased tension. Dura everywhere pinker than usual Pia everywhere cloudy, but puffed out with yellowish fibrinous pus in cervical, middle thoracic, and lumbar regions notably behind. The root ganglia are frequently swollen

Middle ears both free from pus Cribriform plate apparently normal Sphenoidal sinus filled with fibrinous pus Nasal mucosa of right side swollen, injected, on left side apparently normal. Pituitary body soft, shows traces of pus on upper surface. Optic nerves, third nerves Gasserian ganglia (notably beneath), to a less extent seventh and eighth nerves, are surrounded by pus as they leave cerebral dura Left retina excised, shows no injection.

Anatomic Diagnoses.—Acute cerebrospinal leptomeningitis Serofibrinous exudate of vertex, Sylvian fossa, interpeduncular space, pons, vermis and horizontal fissure of cerebellum, pia of cord, origins of cranial and spinal nerves, Gasserian and spinal root ganglia Acute purulent internal hydrocephalus and seropurulent exudate in cisternæ General edema of brain and cord, particularly of vermis of cerebellum Empyema of sphenoidal sinus Edema of lungs Bronchopneumonia of both lower lobes Herpes labialis Numerous minute hemorrhagic lesions of back and thighs. Acute splenitis. Acute and chronic nephritis Slight aortic and mitral sclerosis Extra cusp to pulmonary valve. Chronic adhesive pleuritis (bilateral)

Microscopic Findings.—Smear from sphenoidal sinus shows tremendous numbers of organisms, probably all streptococci Smear from vertex shows great numbers of polynuclear leucocytes and mononuclear cells but no organisms Smear from purulent fluid of basal cisternæ shows a very few pairs of small diplococci within leucocytes The results of blood serum cultures confirmed the findings by smear

Examination of the tissue in this case, showed a remarkable variety of pictures Leptomeningitis, although fatal, was in the process of clearing up This clearing up was taking place from above downward The pus at the vertex, about the longitudinal sinus and in pial meshes was sterile. The dominant cells were mononuclear They contained numerous polynuclear leucocytes and fragments of nuclear material, besides considerable fat No organisms could be found in these tissues The picture thus resembled that in a healing leptomeningitis of meningococcal origin.

The pus at the base, on the contrary, contained a few pairs or short chains of an organism, which proved to be *Streptococcus pyogenes* in culture. The meshes of the pia at the base showed a higher proportion of polynuclear leucocytes than the pus at the vertex Mononuclear phagocytosis was in process, but the healing must be regarded as in a far earlier phase than that of the vertex.

Traversing the bone at the base of the brain and examining the mucosæ of the sinus, a picture of acute inflammation is found. The polynuclear leucocytes here far outnumber the mononuclear cells and the tissues are filled with countless chains of streptococci The general picture in this case anatomically resembles that in a meningococcus case of meningitis The clearing up of the exudate takes place irregularly and from above downward.

GENERAL CLINICAL SUMMARY

Seven patients were male, two female Seven patients were over 30 years old, two of these over 50 One was nineteen, one an infant Five cases showed otitis media

DURATION OF ACUTE SYMPTOMS	DURATION OF CEREBRAL SYMPTOMS
Case 1—4 weeks	24 days
Case 2—24 days	3 days
Case 3—4 weeks	4 weeks (8 days?)
Case 4—13 weeks	Brief
Case 5—Chronic middle ear (6 years) 24 days	24 days
Case 6—7 days	7 days
Case 7—7 days	7 days
Case 8—2 weeks	2 weeks
Case 9—10 days	10 days

As will be seen by comparison with the durations in a series of pneumococcus cases reported by Southard and Keene,[2] the durations in these streptococcus cases run a trifle greater than in the pneumococcus cases

GENERAL ANATOMIC SUMMARY

The brain lesions vary in character and distribution The leptomeninges showed lesions in all cases Cases 4 and 3 were exceptional. Case 4 showed distension of the pial meshes with a flocculent liquid exudate (which might readily simulate the so-called meningitis serosa) On the other hand, Case 3 showed an opaque tense pia mater of the vertex, with a thin web of organizing tissue at the base (simulating the appearance of a late meningococcal infection) The other seven cases all showed a more cellular exudate, variously described as thick, tenacious or fibrinous, and as opaque yellowish or greenish in color

The distribution of the pial exudate is interesting Except the hydrocephalic (Case 8), the base showed exudate in all cases, if we include the serous case (Case 4), if we include Case 4 as an exudative case, in all cases except Case 3 (organizing) and Case 5 (fulminant operative case) The cord is involved from the base, as a rule, the ventricles from the base or from abscesses of the substance adjacent to the ventricles

The lesions of the brain substance are various Flattening of the gyri stands in close relation with involvement and probably with actual distension of the ventricles When flattening is absent, the substance is soft and moist and may be finely injected No case of cortical flattening fails to show exudate in the ventricles, but in early stages of ventricular exudation the sulci may flare normally Frank abscesses occurred in Case 2 (right temporal lobe) and Case 5 (right cerebellar hemisphere)

Cases 1, 2, 4, 5, 8 showed otitis media. Of these Cases 1, 2, 5 came to mastoid operation Case 4 was an erysipelas case The nasal sinuses were affected in Case 9 Of the others Cases 3, 6, 8, 9 showed lung lesions which can not be certainly brought into relation with the leptomeningitis Case 7 showed septicemia with icterus Decubitus of one buttock occurred in Case 1, in multiple areas in Case 8, hemorrhagic cystitis in Case 2

Of chronic lesions, whose relation to the infection can not be asserted, the following occurred arteriosclerosis in Cases 1, 4, 9, chronic pleuritis in Cases 1, 2, 3, 4, 6, chronic internal hydrocephalus in Case 8

GENERAL SUMMARY OF MICROSCOPIC FINDINGS

As in previous work with cases of *Staphylococcus pyogenes aureus* and of pneumococcus brain infections, alterations were found in several of the tissues The lesions of the streptococcus series present a close resemblance to those of the pneumococcus series Characteristic for both organisms are the lesions of the vessels The vascular lesions (described in more detail in the paper on pneumococcus infections) may serve to distinguish the pneumococcus-streptococcus cases, as Dr Councilman has suggested, from meningococcus cases, It would be less easy to distinguish these vascular lesions from those in tuberculous leptomeningitis, in which the occurrence of local necrotic areas might need to be considered in making a diagnosis from the tissues. With a sufficiently long series of cases, it might be possible to mark out, from the vascular lesions alone, the course of the disease leptomeningitis

Not merely the vessel lesions, but also the meningeal exudates serve in their variety to show how complex is the question of the natural history of leptomeningitis. As indicated in the two former papers,[1, 2] the occurrence of exudates with numerous mononuclear cells of the lymphocyte series is in itself not sufficient to differentiate any one type of leptomeningitis, such as the tuberculous, the syphilitic, the general paretic Plasma cells are ubiquitous The meninges exhibit exudates of a very variable character in many infections and toxic conditions Perhaps it is not immediately necessary to ascribe the variations of exudate to different qualities of pathogenic agent It will be desirable to work out first the time relations of a few organisms

GENERAL SUMMARY AND REMARKS

The foregoing cases of streptococcus brain infection are of interest in comparison with the cases of pneumococcus brain infection described last year The main results may be stated in connection with those of the pneumococcus study

As with the pneumococcus series, the questions of main interest are brought up by the varying extent and effect of lesions like (1) arteritis and phlebitis, (2) the cellular infiltration of the meninges with its variation in respect to phagocytosis and (3) the attendant cellular and, in certain cases, fibrillar gliosis

Clinically viewed, the cases are of various duration and run a trifle longer than the pneumococcus cases The relation of streptococcus meningitis to lung lesions is less suspicious than that of staphylococcus or pneumococcus brain infections to lung lesions The part played by lung lesions in bringing about meningitis has probably been overestimated The streptococcus cases seem to be more pronouncedly "cerebral" or "meningitic" from the very start of acute symptoms than are the pneumococcus and staphylococcus cases, which are a little more "primary"

Anatomically viewed, the streptococcus cases preserve their resemblance to the pneumococcus cases even to the production in some cases of small abscesses Particular attention may be called to the case simulating meningitis serosa (Case 4) It would be well to review the cases of this disease to be found in the literature and exclude those without bacteriologic examination

Considered histologically, the streptococcus cases again resemble the pneumococcus cases The same relations of bacteria to leucocytes, of leucocytes to cells of the macrophage type are shown in the two series The intimal infiltration of the arteries and the intimal proliferation and exudative lesions of the veins run parallel in the two cases The occurrence of early fibrillar gliosis (in the sense of the production of new fibrils by the swollen neuroglia cells) is important. The interpretation of early fibrillar gliosis is not easy, since it is necessary to exclude extraneous causes (old age, arteriosclerosis, chronic active lesions) for its occurrence

An extensive series of guinea-pig inoculations, which need not be reported in detail, confirmed the main result, viz the parallelism in action of the two organisms, pneumococcus and streptococcus Orbital inoculations simultaneously in numerous animals with histologic examination of animals killed on successive days were employed as in previous work The inoculations of the strains used, as a rule, produced no clinical sign, despite the suppuration present As in the human cases, each of the lesions found is apparently wholly curable taken by itself

The reversible character (to use a phrase from books of logic) of the phenomena is shown in the strikingly various pictures presented by the exudate in Case 9 taken from the vertex downward

Indeed, it is rare to find in streptococcal, as in other forms of acute leptomeningitis, any single lesion which is necessarily incurable It is probable that in many cases the patients die of toxemia This toxemia may vary with the extent of the exudate. The amount of exudate which we see at an autopsy may mislead us in our idea of the proportions of the toxemia, since wide reaches of the pia mater may be sterile, though other parts contain multiplying organisms Differential studies of the exudate in several places are essential if we are to get a fair sample of the conditions Such studies might readily assume clinical importance

The early glioses found in several cases are of some importance both in general and clinically These glioses will be best considered in connection with those in tuberculous meningitis in a subsequent paper

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THE EARLY DIAGNOSIS OF ABDOMINAL HEMORRHAGE *

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The need of a means of detecting abdominal hemorrhage promptly, surely and safely has long been felt, and the inadequacy of present methods is so generally recognized that no discussion of that phase of the subject is necessary at this time.

Serious abdominal injuries are comparatively common, and it is well known that a large percentage of them are fatal In those cases of abdominal injury in which severe hemorrhage results the majority of the patients die within an hour, while in other cases, in which the injury may have been just as severe, the hemorrhage may be insignificant and yet sepsis may follow The signs of sepsis do not appear at once, but are delayed, so that by the time a positive diagnosis can be made in the majority of cases operation is useless

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*Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty seventh Annual Session June 1906

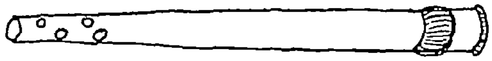
* From the Department of Physiology Northwestern University Medical School.

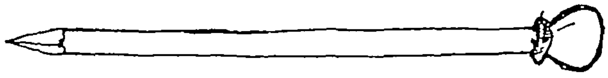
To complicate the problem of diagnosis, the majority of cases of abdominal injury are found to be without definite external sign, thus rendering obscure the nature and severity of the injury, while the ordinary signs of hemorrhage are manifestly unreliable in the presence of shock, which is the usual condition presented in cases of severe abdominal injury

In every such case the possibility of sepsis must be recognized and preparations should be made for its proper treatment The most favorable time for the removal of septic material is immediately after it is introduced Unfortunately, the symptoms which render possible a diagnosis and insure the necessity of operative procedure do not appear for some time after the injury during which time the germs are rapidly multiplying and increasing in virulence

Confronted by these conditions, and recognizing that the life of his patient depends on his early diagnosis of sepsis, the surgeon has felt himself forced to the expediency of an exploratory laparotomy as the only positive means of an immediate and accurate diagnosis available to him

This method of solving the problem is clearly open to serious objections, for, in the first place, it is unscientific to take so serious a step as a laparotomy until all other available means of diagnosis have been exhausted In the second place it is sometimes impossible to obtain the consent of the patient or his friends for an immediate operation. In the third place it would add much to the condition of shock of the patient, who might already be in a critical condition, and the procedure might serve only to prove that no operation was necessary, as has happened repeatedly in the past





It is the purpose of this paper to show that there is an aid to diagnosis which has heretofore been overlooked and which may in any case be used to determine whether or not the injury has caused abdominal hemorrhage

DESCRIPTION OF INSTRUMENT

The instrument used consists of a trocar about three inches long, the cannula having a lumen of one-sixteenth of an inch in diameter and a needle which just fits into the cannula, but is longer, so that the point projects (Fig 1) One end of the cannula is thin, but not pointed, while the needle has a triangular point which projects from the end of the trocar at one end and a handle which can be held firmly between the thumb and finger at the other end One end of the cannula is fitted for the attachment of an aspirator or a hypodermic syringe Near the opposite end are several holes in the side of the tube about the diameter of the lumen of the tube and far enough apart to avoid weakening of the trocar (Fig 2)

With the needle in place, the instrument can be inserted into the abdominal wall and by careful manipulation forced through it and the parietal peritoneum The needle can then be withdrawn and the aspirator attached The side holes insure an opening for the entrance of fluid, should the one at the end be occluded by pressing against the wall of the intestine

The instrument may be kept sterile and ready for emergency use by being placed in a tube filled with alcohol and properly sealed The alcohol may be used for preparing the field of operation and thus avoid any delay

EXPERIMENTS

Exp 1—Anesthetized dog The instrument was carefully inserted into the abdominal wall until it seemed that the parietal peritoneum had been pierced, leaving the point free in the peritoneal cavity The abdomen was then opened by a median incision near the point of insertion of the trocar and careful inspection showed that the trocar had penetrated to the peritoneal cavity without perceptible injury to the peritoneal covering of the intestine Several more punctures were then made and in no case was the intestine punctured or injured. A series of similar punctures were tried successively on five other dogs, all of which verified the results obtained above.

Exp 2—A series of observations were made to determine the manner of entrance of the trocar One edge of an abdominal incision being turned back, a puncture was made so that the trocar came through at a point where the intestine touched the wall, as the point came through the parietal peritoneum the intestinal wall was pushed before it without apparent injury, owing to the resistance of the wall and its free mobility This result was verified without exception in a series of experiments on other dogs These experiments seem to show conclusively that with careful manipulation there is practically no danger of puncturing the intestine If there is uncertainty as to whether or not the trocar is through the wall, a test can be made by partially withdrawing the needle, if the point is in the peritoneal cavity it will be relatively freely movable, and if it is not through, it will be more fixed.

Exp 3—Having satisfied myself as to the practicability of passing the trocar into the peritoneal cavity I proceeded to the problem of detecting hemorrhage Another dog was anesthetized and by means of a small incision hemorrhage from the spleen was produced. Three minutes later a puncture was made four inches away, a glass syringe attached to the trocar and blood drawn off Punctures were made at other points on the same side and in each case blood was obtained. In another dog hemorrhage from the liver was produced and four minutes later blood was obtained from several points on both sides These results were verified by a series of tests made at a later time So long as the blood remained in a liquid state it could always be detected, but here another problem suggested itself, for the blood may clot within a very short time after the injury

Exp 4—Anesthetized dog Trocar inserted and 1 ounce of water injected, then some of it was withdrawn with syringe It was perfectly clear This was repeated, using various amounts of water, showing that normally there is no discoloration of the water Hemorrhage from the liver was produced which ceased in two minutes In thirty minutes the blood had all clotted as shown by an incision

The trocar was inserted four inches from the border of liver and 40 c.c of water injected A syringe-full was then withdrawn and it was distinctly blood tinged Repeated experiments showed that clotted blood in the peritoneal cavity may be detected invariably by the discoloration of the water

The evidence seems conclusive and demonstrates the ability to detect at once blood in the peritoneal cavity, whether fresh or clotted

In a large per cent. of all abdominal injuries there is hemorrhage, therefore the value of the above method is apparent at once, since by it the diagnosis of hemorrhage can be made absolute in less than three minutes after the patient is seen

The usefulness of the instrument would not be limited to the detection of hemorrhage, but could be demonstrated in case of rupture of the bladder, for in that case there would be an abnormal amount of fluid in the peritoneal cavity and it could be tested for urea Furthermore, in cases of rupture of the bowel a fecal odor would be obtained from the fluid injected and withdrawn The instrument might also be applicable to hemorrhage in case of the rupture of the uterus, for this is sometimes suspected long before it can be demonstrated

It is not intended that this instrument shall replace the other methods of diagnosis, but that it should be combined with them The history of the case should be taken with great care as to the precise manner of the injury and the exact nature of the object causing it and these points duly considered with reference to their probable results, as it might indicate the point at which the puncture should be made

SUMMARY

1 Present means of diagnosis of abdominal hemorrhage are inadequate
2 An accurate diagnosis can not be made soon enough without an exploratory laparotomy
3 Exploratory laparotomy involves unnecessary risk
4 Experiments show that (a) an exploratory puncture is practicable, (b) it would diagnose hemorrhage
5 Exploratory puncture is a simple and safe procedure
6 It renders possible a prompt and accurate diagnosis of abdominal hemorrhage

DISCUSSION

Dr S J Meltzer, New York City, said that a trocar with a side opening was employed by him for experimental and practical purposes more than twenty years ago It is a purely practical question Abdominal hemorrhage can be well diagnosed without puncture by a trocar The sudden onset of severe pain in the abdomen, symptoms of shock and collapse, an area of dullness and a history of trauma are sufficient for the diagnosis If the blood is hidden, the trocar might not reach it, or trocar might get into the lumen of some part of the gut instead of into the thin layers of blood between the coils of the viscera The possibility of infection has also to be taken into consideration The prevailing view in medicine and surgery is rather against the employment of a probatory puncture under such circumstances

EXPERIMENTS ON VENOUS BLOOD PRESSURE AND ITS RELATIONS TO ARTERIAL PRESSURE IN MAN *

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DENVER.

The use of artificial schemata for teaching the mechanical principles of the circulation is properly considered one of the most valuable of our laboratory methods

As arterial pressure—the driving force of the blood—is a function of three variables, the output of the pump, vascular elasticity and peripheral resistance, when these factors are known, the calculation of the blood velocity and blood pressure in any part of the vascular circuit would appear to be a matter of gratifying simplicity But when we study the hemodynamics of the living animal, especially when in clinical work the vascular apparatus departs more or less from normal, deductions made from principles established by the use of artificial machines will lead us far astray from the truth The error involved is not in the teachings of the schema as a schema, but in our poor logic in trying to measure the workings of a very complex living machine by those of a very simple artificial one

Bayliss and Starling[1] have done the good service of demonstrating on animals departures from such a course of circulation events as might have been predicted by a mere student of mechanics They show, for example, that injection of salines into the circulation of a living animal raises the venous pressure proportionately more than the arterial, that capillary blood pressure depends more on venous than on arterial pressure, that a fall of arterial pressure does not necessarily involve a fall in capillary pressure

A recent clinical case of mine illustrates the point of view which is here emphasized A woman, about 63 years of age, whose heart, lung and kidneys are essentially sound, has, during the past ten years, frequently broken down with attacks marked by subjective misery, by constipation, by great diminution in the volume of urine passed and occasionally by the expectoration of pure blood While she seemed to be approaching such a crisis her arterial blood pressure was found very high—about 170 mm Hg Her venous pressure was moderately high Administration of nitroglycerin for a few days was followed by a lowering of arterial pressure and an even more marked lowering of venous pressure, and the patient felt much better

The explanation made of the clinical history is as follows The root of the disorder lies in the high arterial blood pressure The left ventricle gradually fails, particularly when harrassed as the result of worry and mental and physical overstrain on the part of the patient, and the residual blood at the end of systole gradually so accumulates as to engorge by back pressure the pulmonary circuit, hence the occasional hemoptysis The elevation of venous pressure and passive congestion leading to the accumulation of gouty metabolites and diminished urinary secretion are but links of the same chain Dilatation of the peripheral vessels by means of nitroglycerin drains into these capacious channels the excess of blood and relieves stagnation in the heart and veins

The phenomena of the venous circulation can not be deduced from a knowledge of arterial blood pressure, since this contributes but a single factor out of several which determine venous blood flow Venous blood pressure, like the arterial force, is determined by the ratio of input to resistance offered to output

Broadly speaking, the input and the venous pressure vary directly with mean arterial blood pressure and inversely with contraction of the arterioles The output varies inversely and the venous pressure directly with the resistance to flow This factor is made up of the resistance, positive or negative, offered to the entrance of blood into the right auricle, to which must be added the influence of the intrinsic contraction of the veins, their compression by variable external forces, as muscular pressure and mechanical stretching, and especially by the influence of gravity

It is becoming more and more obvious that the facts of the circulation demand a functional division of the venous system in which the splanchnic area forms one group of vessels and the external veins another The latter are subject to every influence of environment, capable of a rapid normal variation between the extremes of dilatation and complete emptiness the former are relatively shut off from external stimuli and have a capacity which, uncontrolled by vasomotor regulation would accommodate all the blood in the body Physiologists have appreciated the importance in the circulation of this potential splanchnic abyss ever since the

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* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty seventh Annual Session June 1906

[1] Bayliss and Starling Observations on Venous Pressures and Their Relations to Capillary Pressures Jour Physiol 1894 vol xvi, p. 150

discovery by Ludwig and Cyon,[2] forty years ago, of the function of the depressor nerve This nerve, it will be recalled, is a delicate twig having an independent course in a limited group of mammals and passing out of the vagus and superior laryngeal nerves to end in the heart The nerve is purely afferent in function, stimulation of the central end of the divided nerve causes a steady lowering of arterial blood pressure to the extent of from 30 to 50 per cent, which is dependent on reflex inhibition of tone in the splanchnic arterioles

Clinicians do not seem to have been impressed with the pathologic importance of the splanchnic vascular apparatus until Leonard Hill[3] demonstrated the extraordinary effects of gravity on its circulation, particularly in subjects weakened by toxic agents The work of Oliver[4] and others has emphasized the functional supremacy of splanchnic circulation, and Abrams[5] has recently devoted a monograph to the cause and treatment of splanchnic neurasthenia

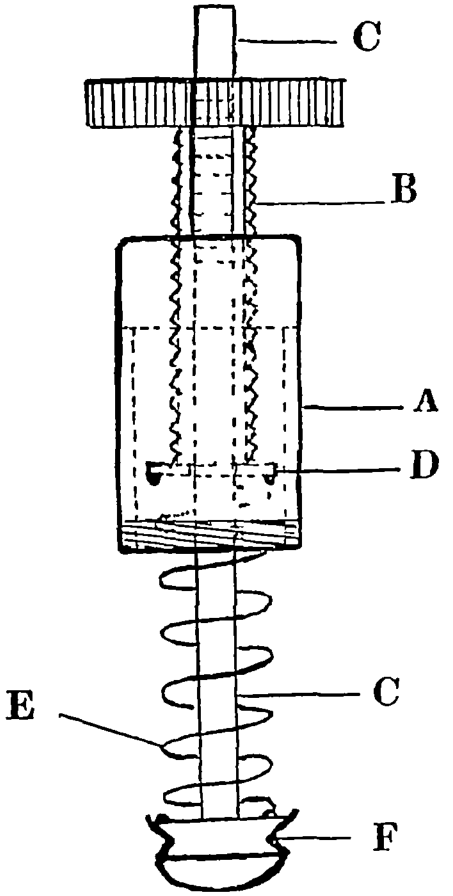

Figure 1.

Briefly stated, the relation of the so-called splanchnic reservoir to the general circulation is as follows In the normal individual, peripheral resistance to the blood flow in the various districts of the body is so co-ordinated that mean arterial blood pressure shall vary within but narrow limits If the vasomotor mechanism controlling the splanchnic area is enfeebled the circulation therein is correspondingly released from physiologic control and is subject to gravitation In the erect position, therefore, a man's blood tends to settle in the abdominal vessels, but, while lying supine, the force of gravity no longer impedes the return of the blood to the heart It is obvious that the fate of the general circulation depends in a peculiar way on the irritability and power of the splanchnic vasomotors This mechanism must compensate by increased activity for every excess of intravascular pressure locally brought to bear on it, but, on the other hand, abnormal elevation of general arterial blood pressure is prevented through the depressor nerve whose normal stimulus probably consists in the mechanical strain of the contracting ventricles and which is to inhibit the vasomotor centers for the splanchnic area

That the apprehension of these principles has not been general is to be suspected from the discordant results that comes out of the researches of those who have investigated the postural variation of the arterial blood pressure in the human subject

It will not be disputed that, to maintain the mean arterial tension, outflow of vasomotor nerve energy must be greater, to compensate the drag of gravity, in a man in the erect position than when recumbent. If there is overcompensation for the force of gravity, the arterial blood pressure in the upright position may be expected proportionately to exceed that found when recumbent. While if the more or less pathologic condition of undercompensation prevails, it is easy to understand how the general arterial blood pressure may be higher when measured in the recumbent than in the upright position That it is the abdominal vascular system especially and not that of the lower limbs which acts as a blood reservoir was ingeniously demonstrated by Oliver,[4] who, under certain conditions, caused a marked elevation of the arterial pressure in the recumbent position by compressing the abdomen with a considerable weight (28 pounds) Essentially the same results have been obtained in another way by Erlanger and Hooker[6] in their admirable researches on blood pressure in man As a matter of fact, my own observations bearing on this point seem to show that in vigorous subjects systolic arterial pressure is slightly higher in the upright than in the supine position, while in the majority of those who are "neurasthenic," particularly in those with flaccid abdominal walls, the results are very much reversed

A clinical fact of considerable interest finds an interesting explanation when considered in the light of the foregoing discussion Now and then it is found in people with organically sound hearts that the radial pulse on one or both sides completely disappears when the arms are extended above the head I have found it so especially in subjects of passive pulmonary tuberculosis and neurasthenia But the occurrence is so frequent in cases exhibiting well-compensated valvular disease of the heart that its cause deserves special investigation I have noted the pulse failure in mild grades of uncomplicated mitral insufficiency, mitral stenosis and aortic insufficiency Occasionally the phenomenon is so marked that the elevation of the arm to the horizontal, the forearm being bent at a right angle, causes pulse failure The cause can not lie in abnormally low arterial pressure, for I have found the pulse to fail in two individuals in whom the systolic pressures averaged 140 and 160 mm Hg, respectively The pulse never fails with the arms held vertically while the subject lies supine, but when he is sitting or standing Slight mental excitement or physical exertion may faintly restore the pulse which has disappeared The explanation of these facts seems to be contained in results which I, assisted by D W Steiner,[7] elicited more than twenty years ago in a study of the physiology of the depressor nerve When the arm is elevated the circulation can be maintained through its arteries only through some compensation which implies increased output of heart or increased vascular tone When blood drains out of the elevated arm it must be accommodated by a dilatation of the vascular circuit, unless there is a rise of arterial pressure, for which I can find no evidence In mitral lesions, at all events, there can be no reason to suppose the excess of blood is accommodated in the heart itself

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[2] Ludwig and Cyon Arb aus d. phys. Anstaltzn. Leipsic 1866 p 128

[3] Hill Influence of the Force of Gravity on the Circulation of the Blood Jour Physiol 1895 vol xviii p 15

[4] Oliver Blood and Blood Pressure London 1901

[5] Abrams The Blues (Splanchnic Neurasthenia) " 1904

[6] Erlanger and Hooker An Experimental Study of Blood Pressure and of Pulse Pressure in Man Johns Hopkins Hosp Rep., vol xii 1904

A consideration of the publication last referred to[7] renders very plausible the suspicion that even the small excess of resistance offered to the arterial circulation by elevation of an arm is felt by the heart and that this organ, through the depressor nerve, whose existence in the human economy can not be doubted, complains of the increase of strain, from which it is immediately relieved by a reflex depression of the vasomotor center It is entirely open to conjecture that in valvular heart disease there is developed a heightened irritability of the depressor nerve mechanism and that part of the benefit which clinical observation shows to accrue from prolonged rest following acute conditions of cardiac disease depends on ample time being given for the modification of depressor nerve lability

A fortiori, it may be suspected that in a loss of this irritability lies the explanation of many of those mysterious ruptures of compensation with which the clinician has to deal The theory just suggested attempts to explain only pulse failure in persons having strong, though physically imperfect, hearts and vigorous vasomotor mechanisms When the pulse fails in the elevated hands of those who are constitutionally weak, though with normal heart valves, it seems more reasonable to presume that the enfeebled vasomotor system, instead of normally reacting to the stimulus of diminished pressure in the brain and increased pressure in the arterioles, allows the latter to dilate to escape the strain

According to the views already enunciated, the two groups of cases may be easily distinguished by the manner in which the arterial blood pressure reacts to change in the position of the body In the normal vascular system the hydrostatic strain on the splanchnic vessels incident to the erect position is fully compensated by their increased tonicity, so that when the recumbent position is assumed the rate of blood flow into the right auricle is not materially changed Whereas in the weak vascular system the blood column, in the upright position, settles in the splanchnic veins to such a degree as to lower arterial pressure, then when the recumbent position is assumed gravity no longer impedes the passage to the heart of this retarded stream and arterial pressure is raised by the excess of blood added to the circulation

The following are a few extracts from actual clinical observation on two groups of patients, in both of which there was failure of one or both radial pulses when the arms were elevated The arterial pressures were taken with the Stanton instrument, having a cuff three inches broad and measuring only systolic or maximal pressures It will be noted that in the individuals with valvular lesions the systolic pressures were above normal and offer no explanation of the pulse failure

1 INDIVIDUALS WITH VALVULAR DISEASE BUT PRESUMABLY STRONG VASOMOTOR SYSTEMS

Case 1 —Mr R, aged 64, has slight degree of mitral insufficiency, and slight but palpable arteriosclerosis The left radial pulse disappears when arms are held up and back. Arterial pressure, sitting, is 161 mm Hg, recumbent, 154 mm Hg

Case 2—Mr J, aged 21, has slight degree of mitral insufficiency As the arms are elevated first the left and then the right pulse disappears Arterial pressure, sitting, is 142 mm (The pressure, when recumbent, was somewhat lower, but the record has been lost)

Case 3 —Miss Z, aged 23, has a slight degree of mitral stenosis On elevating the arms, first the left, then the right, radial pulse disappears Arterial pressure, sitting, is 138 mm, recumbent, 129 mm

All the above were vigorous looking persons

2 INDIVIDUALS WITHOUT VALVULAR DISEASE BUT WITH EVIDENCES OF VASCULAR WEAKNESS

Case 1 —Miss S, aged 23, rather an athletic girl with a normal heart but decidedly neurasthenic. Right radial pulse disappears when arms are elevated. Arterial pressure, sitting, is 100 mm, recumbent, 122 mm

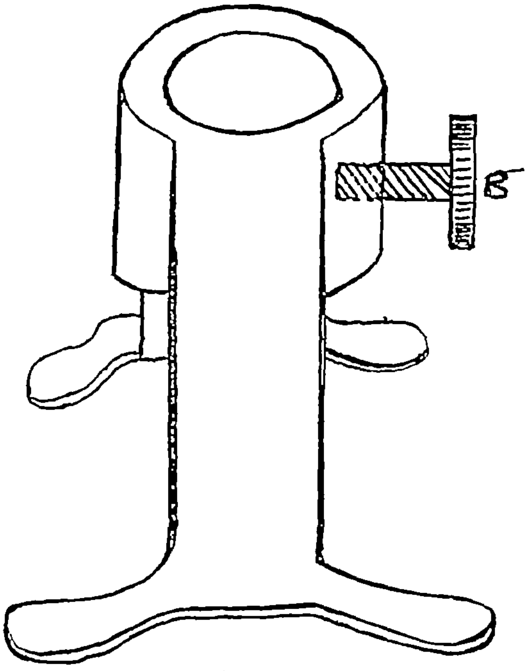

Figure 2

Case 2 —Miss H, aged 27, is a neurasthenic. Pulse is weakened and occasionally disappears when arms are elevated. Arterial pressure, sitting, is 113 mm, recumbent, 125 mm

Case 3 —Mr G, aged about 63, has a weak, intermittent heart, suspected of slight myocarditis He is a somewhat active man of affairs The abdomen is flaccid, pulse and heart beat weak and left radial pulse disappears when arms are elevated. Arterial pressure, sitting, is 110 mm, recumbent, 137 mm

INSTRUMENTAL METHOD OF MEASURING VENOUS BLOOD PRESSURE

When a vein, as of the hand, is obliterated by the pressure of a finger and the blood is wiped out of the vessel in the direction of the heart as far as the first valve, the vein segment remains empty until the finger pressure is relieved Obviously, if the occluding finger could be replaced by a recording instrument capable of exerting variable pressures on the vein the blood pressure within the latter could be determined with precision The instrument to be described was constructed with this object and has been called a *spring blood-pressure gauge* Not until after my instrument was made and the greater part of my observations were completed was my attention attracted to the monumental work of Oliver[4] and to his description of a very similar apparatus demonstrated by him in 1898 [8]

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[7] Sewall and Steiner 'Study of Action of the Depressor Nerve and a Consideration of the Effect of Blood Pressure on the Heart Regarded as a Sensory Organ' Jour Physiol 1885 vol vi, p. 102.

The spring pressure gauge is represented in section in Figure 1, magnified two diameters A brass cylinder, A, one half inch in diameter and seven eighths long, is plugged at one end to the depth of one fourth inch to afford a broad bearing to the screw B, which passes through it and which is long enough to have a movement of about three fourths of an inch The screw is bored through the center for the passage of the aluminum piston rod C The lower end of the screw B is swivelled to a small disk of metal, D, three-eighths inch in diameter, which, of course, moves to and fro with the motion of the screw, but is prevented from revolving by two projections from its periphery, which move in slots let into the inner surface of the cylinder A From the outer margin of the under surface of the disk, D, project four small eyelets which serve to support a spiral spring, B, made of fine steel wire The other end of the spiral, which, when without tension, is nearly one inch long, runs through similar eyelets in the upper surface of the ebonite pressure button, F The length of the spring and hence the zero point of the scale, can be adjusted by screwing it into or out of the eyelets The aluminum rod, C, is screwed into the pressure button, F, and passes up through the hollow screw, B Whenever the disk, D, and the pressure button, F, are approximated, the tension of the spring varies proportionately, and the piston rod, C, projects above the screw, B The screw has twenty threads to the inch, and a half inch of the upper portion of the piston rod, which is flattened for the purpose, is ruled in ten divisions When the spring is not in tension the upper mark of the rod scale is level with the top of the screw head The instrument is calibrated by the aid of a mercurial manometer *

It has been found that pressures obtained by the application of an unyielding disk to vessels of various size and depth in the tissues vary widely, though the vascular tension may really be the same [9] Much more accurate results are obtained by interposing an elastic cushion, containing air or water, between the pressure button and the vessel In the instrument this purpose is accomplished by tying over the pressure button the tip of a small rubber finger cot, leaving a small air chamber at the bottom of the button Unlike Dr Oliver, I find that with the small pressure values which frequently have to be measured in the veins, the error of tissue resistance is a factor of considerable importance, even with the use of the elastic pressure pad In my observations, therefore, I have always sought to apply the pressure over a point on the vein having a firm foundation

In using the instrument on another person it is held freely in the hand, the pad is pressed down on a vein, which is then wiped empty, and the pressure is relaxed until the blood begins to flow under the pad, the piston is then pressed against the side of its bed with a finger, the instrument is lifted and the pressure read off In making observations on one's self the instrument is supported in a stand or pedestal whose feet are curved to embrace the vein (Fig 2) Pressure may then be accurately varied by turning the screw, B

It is worth noting that when the vein is occluded by the minimal force necessary to cause its collapse blood will gradually ooze past the obstruction and, collecting against the closed valve ahead, will slowly fill the vein peripherally, and when the tide has reached the pressure button this will be lifted suddenly by the filled vein When the vein has been occluded as described it is very probable, as suggested by Erlanger and Hooker, in explanation of certain results of their own, that its inner walls stick together by a certain force of cohesion But there is probably left at each end of the vein-slit a capillary pore through which the blood percolates, and as the vein central to the area of pressure gradually fills the contact adhesion is suddenly overcome

EFFECT OF GRAVITY ON VENOUS BLOOD PRESSURE

The fundamental part played by gravity as a resistance factor in the venous circulation has already been noted According to Oliver,[4] the pressure of a column of blood increases at the rate of about 1 9 mm Hg for every vertical inch It hardly needs mention that, in measuring venous pressure, allowance must always be made for the relative positions of vein and heart on a vertical scale I have followed Gaertner[10] in assuming that the point of mean venous pressure in the right auricle lies behind the angle formed by the top of the fifth left cartilage with the sternum Most of my measurements were made with the hand vein from three to four inches below this point My records of venous blood pressure were all, when necessary, corrected to this level, therefore, in them the element of gravity is eliminated

The following observation shows how a small excess of blood thrown into the right auricle may be supposed to alter the general venous blood pressure With the left arm resting on a table, the pressure gauge was applied to a vein of the left hand with just sufficient force to keep it occluded for a period of over one minute Then the right arm was actively extended above the head, the blood pressure was so increased that the resistance of the gauge was overcome in three seconds The increase of venous pressure in the left hand thus caused by elevation of the right arm can not be reasonably ascribed to increased flow through the capillaries, but must be due rather to an elevation of pressure in the superior vena cava and presumably in the right auricle, which perceptibly impedes the entrance of blood from the system at large This is a very important conclusion which will be reverted to in the section on the effect of digestion

It should be noted that these observations were carried out on a man of 50 with a structurally sound but slightly weak and sometimes irregular "tobacco heart" While sitting quietly at a table elevation of the legs on a chair caused no decided increase of venous pressure in the hand, the excess of blood flowing from the legs being accommodated, no doubt, in the abdominal vessels Oliver[4] found, as might have been expected, that in the recumbent position the hand-vein pressure was markedly increased by raising the legs to the vertical The clinically important question of the effect of bodily position on venous pressure was not especially considered

EFFECT OF EXERCISE ON VENOUS BLOOD PRESSURE

Oliver and others have noted the physiologic fact, of great importance for clinical purposes, that local muscular exercise markedly accelerates the circulation in the corresponding areas This fact is strikingly illustrated in the following experiment The venous pressure in the resting left hand of a man of 50 averaged 3 4 mm Hg This hand was then exercised by alternately clinching and relaxing it for half a minute The veins appeared first to diminish in size and then rapidly filled The pressure taken immediately after the exercise had risen to 5 3 mm In a man of 27 the pressure, under similar conditions, rose from 3 8 to 5 4 mm There can be no doubt that this increase of venous pressure and blood flow was due to increased input of blood following local arterial dilatation The increase of pressure persisted for a considerable interval—a minute or more—after cessation of the exercise When both hands were supported at the same level, exercise of one had no material effect on the venous pressure in the other In the experiment in which the venous pressure in one hand was shown to be raised by elevation of the other above the head, the increase of pressure in the former was much more considerable when the muscles of the elevated arm were alternately contracted and relaxed

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*The instrument can be obtained from J T Hoyt, mechanic to the physiological laboratory College of Physicians and Surgeons New York or from Messrs. Flint and Lomax Denver

[8] Oliver Jour Physiol vol xxi p ii and vol xxiii p v also "A Few Jottings in Physiologic Medicine" Jour Balneol and Climat., October 1903

[9] Sahli Diagnostic Methods also Oliver's Blood and Blood Pressure

[10] Gaertner Muench med Wochschr 1903 No 47 abstracted in Amer Jour Med Sci 1904 p 907

Gentle exercise of the whole body, such as walking about the house, is followed by a more or less marked rise in the venous pressure of the hand according, apparently, to the state of the circulation at the beginning of the experiment, thus, 1, average pressure before exercise, 3 4 mm , average pressure after exercise, 4 2 mm 2, average pressure before exercise, 4 2 mm , average pressure after exercise, 4 5 mm

Violent and exhaustive exercise, such as rapid stooping of the body with general contraction of muscles, except those of the member in which blood pressure was taken, was followed in a vigorous young man by decided elevation of venous pressure in the unexercised hand, thus Venous pressure in the right hand before exercise, 3 9 mm , venous pressure in the right hand shortly after exercise, 5 3 mm

These results illustrate the fact that, though, as found by other observers, arterial blood pressure may or may not rise as a result of exercise, according to its violence, venous blood pressure, and presumably pressure within the right auricle, always does so This is evidence for the belief, supported in other directions, that the exercise dyspnea of patients with cardiac disease, and probably of healthy people in high altitudes, is largely a sign of right-heart strain

EFFECT OF TEMPERATURE ON VENOUS PRESSURE AND VEIN CONTRACTION

The relatively slight musculature of the veins has led to under-estimation of their contractile function In comparing the veins with the arteries as contractile mechanisms it is only fair to consider the ratio of muscle mass in a given section of vein to the mean blood pressure it must react against, with the similar ratio in a corresponding artery The subject of vein physiology seems to have received very limited attention Bancroft[11] studied the veins in the hind limbs of cats and rabbits No marked decrease in the caliber of the veins was produced by clamping the aorta, the vein becoming simply flattened and flabby But stimulation of the sciatic nerve caused marked contraction which was irregularly localized The effect of the stimulation was much influenced by the conditions of exposure of the vein and the vasomotor apparatus was very subject to fatigue A study of the human veins demonstrates 1 That the vein may be emptied either passively by failure of inflow or actively by its own contraction 2 That in the relaxed and partially filled vein, at least when held horizontally, the blood may flow freely past a valve in either direction 3 That the closure of a vein valve is usually, if not always, produced by active vein contraction, primarily of the vein segment peripheral to the valve and probably secondarily by that central to it. It seems reasonable to suppose that abnormal dilatation (varicosity) of veins depends on failure of vein contractility to make the valves sufficient 4 Vein contraction can be sharply localized 5 The normal master stimulus of venous contractility is cold, especially when associated with light friction 6 The contractile manifestations of the veins vary greatly, probably from introduction of a fatigue element. 7 It is possible that innervation of the skeletal muscles is accompanied by contraction of the corresponding veins

In the superficial veins and those of the lower limbs the musculature is said to be relatively well developed *"Flattened and circularly arranged muscle cells are met with at the inner surface of many of the larger valves "*[12]

In persons in whose arms the superficial veins are prominent, the veins contract and the valves become more or less visible on exposure of the arm to cool air If now the arm is slightly brushed from wrist to shoulder by a single pass of the other hand, the veins thus irritated may become completely invisible, or still appear as white cords, though their course is plotted by the valves, each of which is held shut by a droplet of blood kept in place by the contracted vein central to it The contractile power of the vein may still keep the droplet of blood in place over the valve for a time when it is opposed by the influence of gravity through elevating the arm When a vein is dilated, mechanical irritation of a limited segment sometimes causes a tonic local contraction of that part When the blood is smartly brushed out of a full vein up to a given valve and then prevented from re-entering below, the emptied segment of vein seems to be actively contracted and sharply marked off from the full vein terminated by the closed valve beyond.

When the hand is soaked in cold water for a minute, the veins contract and become nearly or quite invisible But at the same time the skin of the hand becomes very red There is no accompanying change of arterial pressure in the arm The congestion of the hand is evidently produced by capillary engorgement due to increased resistance offered to the flow of blood by the contracted veins The venous pressure falls somewhat after this procedure, but is not nearly so low as when measured in a vein of the same degree of distension when the skin is pale That is, in the first case the ratio of inflow to resistance in the veins is much greater than in the second. In other words, when a vein becomes smaller by active contraction of its walls the pressure within it tends to rise, when the diminution of its size depends on diminished arterial inflow the venous pressure always falls

The localized contraction of veins is well illustrated after immersion of the hand and half the forearm in cold water For minutes after the removal of the member the veins remain small or invisible over the area which had been chilled, while just above it the veins of the arm, fed from the deeper tissues, may be fully dilated, the result is especially striking if a slightly constricting band is laid round the upper arm

As is familiar to all soaking the hand in warm water causes the skin to redden and the veins to dilate. Simultaneously the venous pressure is increased for a time, but the elevation of pressure seems to pass away while the veins still continue dilated. The results of such experiments depend largely on the state of the circulation at the beginning of the observation. It is worth noting that prolonged immersion in hot water exerts something like a paralyzing effect on the contractile mechanisms of the veins The veins of the heated hand fail to contract under conditions of gravity, etc, to which those of the other hand adjust themselves

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[11] Bancroft 'The Venomotor Nerves of the Hind Limb " Amer Jour Physiol 1898 vol 1 p 477

[12] Huber Bohm Davidoff "Text Book of Histology " 1900

Experiments on the veins elicit more decided results when performed on rising in the morning than after the fatigues of the day It is obvious that venous pressures to be compared together must be measured under the same conditions of external temperature

THE INFLUENCE OF RESPIRATORY MOVEMENTS ON VEIN VOLUME AND PRESSURE

My attention was directed to this subject by the statement of Gaertner[10] that "negative pressure within the thorax produced an increase of pressure within the right auricle." I was astonished to find that the veins of the hand and forearm actually swelled in inspiration and diminished in expiration The inspiratory swelling of the veins is accompanied by an increase of blood pressure within them It is a familiar fact that when the arm is inclosed in a plethysmograph it tends to diminish in size during inspiration and increases during *expiration It is to be inferred, therefore, that any* excess of blood in the veins during inspiration must be drawn directly from the arteries The correctness of this deduction is easily demonstrated Though the respiratory rise and fall of the veins is sometimes plainly obvious to the unaided eye, it may best be demonstrated when magnified by a lever formed of a strip of stiff paper about one-quarter of an inch wide and four inches long and gummed on one side One end of the paper strip is stuck to the skin close to the vein across which it rests in close contact Under favorable conditions such an arrangement demonstrates that the blood flow in the peripheral veins is far from being a steady stream There is usually a more or less marked vibration of the lever synchronous with the arterial pulse, more obvious in one phase of respiration than another Sometimes this cardiac pulsation of the lever is striking in its magnitude and is then, as will be shown later, evidence of dilatation of the arterioles

With the beginning of inspiration the lever begins to rise, reaching its maximum height a little after the beginning of expiration Although under exceptional conditions the lever movements are plain during ordinary respiration, it usually requires forced inspirations to bring them out If, while the lever is showing marked respiratory oscillations, the brachial artery at the elbow is clamped by pressure of the thumb, the lever movements instantly cease If the vein supporting the lever be clamped proximal to it the respiratory motions continue plain until the vein becomes so distended that it no longer responds to the increase of internal pressure. But when the vein is clamped distal to the lever, provided the hand is held in such a position that the next proximal valve is sufficient, the respiratory motion of the lever at once ceases When the arm is bent at the elbow and the forearm is held horizontal it is easy to demonstrate in some individuals that, when the veins are relaxed and only partly filled the current of blood may readily pass the valve in a peripheral direction *To accomplish* this, one of the veins of the forearm is clamped several inches peripheral to a valve and partly emptied by raising the arm, with deep inspiration the blind end of the vein fills as if there were no valve at its junction with the larger trunk.

The inspiratory swelling of the veins can usually be demonstrated only under conditions in which the veins are relaxed, moderately full, and when the arterioles are presumably fairly dilated In numerous instances I have found the inspiratory lever motion in persons whose hands have been reddened by immersion in warm water when the lever had shown no motion immediately before applied to the contracted vein of a cool, pale hand The inspiratory wave is apt to be more obvious in the evening when the veins are relatively relaxed, and, according to the state of peripheral circulation, it is common to find the phenomenon to a decided degree on one day when, in the same person, it had been absent on a previous trial. As the respiratory movement of the veins is investigated progressively from the hand to the arm, the inspiratory swelling seems to fail before the elbow is reached, and sometimes it is possible to see even a partial collapse of the arm veins due to the aspirating force of a deep inspiration The same respiratory motion is to be obtained, *though with more difficulty, from* the veins of the feet In this case the advent of the wave seems delayed considerably after the beginning of inspiration It is sometimes found that respiratory oscillations of blood pressure are plainly transmitted through the capillaries with but little cardiac pulsation and *vice versa*

The following interesting results were obtained from an adult female patient lying in the coma of cerebrospinal meningitis The hands were warm and the veins distended. The paper lever resting over a vein of the hand showed regular pulsations of considerable amplitude and synchronous with the radial pulse There was an immediate fall of the lever with each intermission of the pulse. The lever swept down instead of up, and, therefore, the vein became smaller with each inspiration In time the patient was seized with a series of general convulsions Preceding by several seconds each convulsion, the cardiac motion of the lever diminished in amplitude, the lever gradually descended and the vein became visibly smaller These facts were interpreted to mean that the tetanus of the voluntary muscles was preceded by general spasm of the arterioles The phenomenon was of practical value as indicating the administration of chloroform in time to abort convulsions

In order to determine how general might be the occurrence of this inspiratory venous wave, one hundred persons were investigated All but one were adults, ranging from 17 to 75 years of age. Sixty were males and forty females About half were noted as in good health, while those forming the other half represented a considerable variety of chronic disease There was found to be a decided inspiratory swelling of the veins on the hand or lower forearm in 44 cases, a slight swelling in 16, making a total of 60 No respiratory movement could be seen in 25 cases The movement of the lever was both up and down in different periods of the same inspiration in 4 cases and the vein diminished in size (shown by downward movement of lever) in inspiration in 11 cases

Not to prolong this discussion needlessly, it may be said that, while there was failure of lever movement in about one-fourth of the healthy subjects, no downward inspiratory movement (showing uncompensated aspiration by the thorax) occurred except in persons suffering from some disease of the circulatory apparatus, such as arteriosclerosis, uncompensated heart disease, or active pulmonary tuberculosis

The thought at once suggests itself that the respiratory wave of venous pressure is but the propagated respiratory wave of the arterial blood current From the physiologic point of view, the transmission of such pressure changes through the capillaries must have important relations to the nutrition of the body

The still disputed question as to the origin of the respiratory waves of arterial blood pressure, whether due to variable output from the heart or to rhythmic vasomotor contraction, is not settled by this investigation, though the fact that the inspiratory swelling of the veins is much more pronounced with costal than with diaphragmatic breathing, and also the apparent delay in the appearance of the wave in the foot veins (though this point has not been very definitely studied) are both strong evidences in favor of the generally accepted belief that the respiratory wave of arterial blood pressure has a mechanical origin, and is due primarily to the relative excess of blood entering the heart by aspiration during the phase of inspiration On the other hand, the near coincidence in time between the beginning of inspiration and the commencement of the inspiratory swelling of the veins makes it seem that some other factor must be involved. If it were permissible to assume a slight vasomotor inhibition beginning with inspiration all the phenomena would find an explanation. That the arterioles may dilate with inspiration was especially well illustrated in the person of a man, aged 40, who was recovering from a severe break in compensation due to aortic insufficiency The paper lever applied to a hand vein showed well marked oscillations corresponding with both pulse and respiration. When the breathing was deepened the amplitude of the cardiac oscillations of the lever was increased, especially in the phase of inspiration.

EFFECT ON BLOOD PRESSURES OF PROCESSES FOLLOWING THE INGESTION OF FOOD

It would be fruitless to discuss from an *a priori* standpoint the changes in arterial, venous and capillary blood pressures that might be expected to attend the digestive process Dilatation of the splanchnic vessels and the loss of material from blood by secretion into the alimentary canal must, it may be supposed, be compensated by somatic constriction and by absorption of material from the intestines But as the study of the blood pressure in different positions of the body has shown how insidiously physiologic merges into pathologic distribution of blood mass, still more, according to my observations, is weakness in the compensating mechanisms of blood distribution manifested during digestion According to Oliver,[4] during the first stage of digestion lasting about half an hour, the splanchnic vessels dilate, the somatic arteries contract with elevation of arterial pressure, and the venous pressure falls Also, "after the lapse of twenty or thirty minutes the splanchnic area rapidly diminishes, and in about an hour settles down again When the splanchnic area diminishes the systemic arteries and arterioles dilate, the mean arterial pressure falls, and the venous pressure rises"

Such a distribution of digestive events is little supported by actual observation of digestive processes in man and animals My own observations on arterial pressure were unfortunately limited by the use of an instrument measuring only systolic pressures, nevertheless, in connection with the venous pressures, they have a certain value

My observations on the changes of blood pressure accompanying digestive activity were made on 21 individuals, of whom seven were normal and fourteen, inmates of the Denver and Arapahoe County Hospital, suffered from various lesions of the heart and arteries In the former class the venous pressures taken within half an hour of the termination of a meal rose in five and fell in two cases The maximum arterial pressure usually increased slightly (2 to 10 mm Hg), but fell in three instances In a robust but gouty man having abnormally high arterial and venous pressures, the former fell from 1 to 2 mm fifteen minutes after a hearty lunch, but in two and a half hours rose from 3 to 5 mm, while the venous pressure rose very slightly at the first observation, but dropped to about one-half its first value at the second

Two individuals on whom many observations were made at various hours on successive days illustrate the two classes of digestive reaction

1 In the first, a female, aged 40, the effect of a meal is usually to cause the veins to become smaller and the venous pressure less, even if the veins maintain their size the pressure within them falls after meals This fall of pressure may amount to 30 per cent or more of the original The lower pressure continues for about two or three hours and then the pressure gradually ascends, but may not have reached normal in four hours The changes found in arterial pressure were believed to be within the errors of observation A number of conditions, such as time of day, the amount of food taken, etc, may affect the relations of the pressure curve. Thus, on one occasion the usual evening dinner was anticipated by a noonday dinner, succeeded in some five hours by a light supper After supper the usual fall in venous pressure was replaced by a rise In the light of the discussion to follow, this rise may be looked on as a sign of cardiac fatigue

2 In a man of 50, having a weak and irregular "tobacco heart," the digestive process was associated with the opposite effect on venous pressure. The pressure rose immediately after a meal and continued high for about three hours, when it gradually returned to the resting state The former individual feels warmer in the morning than in the evening and her venous pressure is higher in the morning before breakfast than in the evening before dinner, with the latter subject these conditions are reversed The former becomes cool or chilly after a full meal, the latter becomes warm and flushed So far as my inquiries have led, in those who experience a sense of warmth on eating, the effect of a meal is to raise the venous blood pressure, while in those who feel cool or chilly the venous pressure falls That these results have an important constitutional basis is suggested by the adage quoted by Dr Oliver "If you eat to be cold you will live to be old" The postprandial rise of venous pressure can be explained either as the result of increased inflow of blood through dilated arterioles or of diminished output from the veins caused by elevation of blood pressure within the right auricle

On *a priori* grounds it would seem absurd to expect unwonted flushing of the somatic system when the energy of the body is employed with the digestive process On the contrary, experimental evidence is distinctly in favor of the view that rise of venous blood pressure occurring as a result of digestion is due wholly to relative damming back of the blood in the surface veins ing the elevation of pressure in the right auricle which probably accompanies the excessive inrush of blood from the abdominal viscera

The rise of venous pressure during digestion, therefore, would appear to be a sign of weakness of the cardiac-respiratory apparatus On a former page the observation was made that the mere elevation of one arm quickly produced a rise of pressure in the veins of the other hand It is evident, then, that a very minute increase of blood flow into the superior vena cava can raise perceptibly the pressure within that channel and presumably within the right auricle as well But there is not wanting direct evidence that the intra-auricular blood pressure mounts *pari passu* with that of the peripheral veins when these become distended during digestion, and it is wholly reasonable to assume that the former phenomenon stands to the latter in the relation of cause and effect

Gaertner[10] describes a method for estimation of pressures within the right auricle of the human subject The method consists in elevating the arm, bent about 120 degrees at the elbow, and noting the height at which a chosen vein just collapses to the level of the surrounding surface This height above or below the mean point of entrance of blood into the auricle is assumed to represent the positive or negative hydrostatic pressure within that viscus Many observations have led me to the conclusion that the method is impracticable as applied to the hand veins of most persons, but in the individual most thoroughly studied in the present research a large vein crossing the left radius two or three inches above the wrist showed very clearly a change of volume with change of elevation It was found, according to this test, that, as the blood pressure in the veins of the hand rose after the ingestion of food, there was a somewhat parallel rise of pressure within the right auricle

In the fourteen clinical cases representing well-marked lesions of the circulatory apparatus, the change of blood pressures following within an hour of dinner led to no general conclusions In five cases there was a slight or moderate fall in venous pressure, in three a corresponding rise In three cases there was a great fall of about 50 per cent and in three a great rise It is worth noting that a great rise of venous pressure and a drop of 10 mm in arterial pressure occurred in an individual suffering from a very large aneurism of the ascending aorta. Another great rise in venous pressure after eating occurred in a man who died a few days after, suffering from mitral stenosis, aortic stenosis and the familiar signs of extreme break in compensation His arterial pressure was too irregular to be estimated

The evidence when sifted points to the conclusion that with well-compensated valvular lesions of the heart, with or without involvement of the kidneys, and in arteriosclerosis the ingestion of a meal is followed, at least during the first hour, by a more or less decided fall in venous blood pressure At the same time there is usually a drop of from 5 to 15 mm in the systolic arterial pressure In the majority of these cases there was arteriosclerosis and the arterial pressure was abnormally high, ranging from 140 to 220 mm In view of this fall of venous pressure in well-compensated pathologic circulations, it would seem at the outset ill advised to ascribe the rise of pressure so often found in normal subjects to functional heart weakness But if there is truth in the hypothesis formulated on a preceding page that a hyperirritability of the splanchnic dilating mechanism tends to develop in the pathologic heart the results submit to reasonable explanation

Though the problems of circulation belong in their last analysis to the field of chemistry, it is to the mechanics of the circulatory apparatus that the physician in actual practice must apply his efforts for the amelioration of disease We are now in a position to ascertain the normal and pathologic variations of both arterial and venous blood pressure, and pallor or congestion of the skin serves as an index of the state of the superficial capillary circulation The investigation of a considerable number of persons, both in health and with disease of the circulatory apparatus, shows that, while in normal individuals there is a somewhat wide variation of blood pressure in similar vessels, these variations fall within prescribed limits and the ratio of pressure in arteries and veins is fairly constant Pathologic cases, on the other hand, fall into well-marked groups, and, while it would be indiscreet to draw general conclusions from the relatively meager data at hand, the following tentative classification may be permitted of the pathologic circulation as based on actual observation All the subjects were from adult life

GROUP I THE RATIO OF MAXIMUM ARTERIAL TO VENOUS BLOOD PRESSURE INCREASED

The ruling anatomic condition here was one of arteriosclerosis with cardiac enlargement, with or without valvular lesion Arterial pressure is increased and venous pressure is positively lowered A considerable proportion of cases belonging to this group present no palpable signs of arterial degeneration, but the cardiac dilatation found is evidence of long-continued arterial overstrain It seems probable that in these cases either tonic arterial spasm is produced by some toxic agent circulating in the blood, as is suggested by Dr W H Thompson[13] to explain the high tension observed in certain forms of nephritis, or that the circulation has been hampered by an increase in the viscosity of the blood

In cases presenting well-compensated mitral insufficiency in early life, the venous pressure was somewhat raised as well as the arterial, but in older subjects with arteriosclerosis there was both a positive rise in arterial and fall in venous pressure, although in these and other cases of arterial degeneration the veins were often large and flabby Persons belonging to this class are characterized by a pallor of the skin roughly proportionate to the departure above and below normal of arterial and venous pressures, respectively

GROUP II THE RATIO OF MAXIMUM ARTERIAL TO VENOUS BLOOD PRESSURE DECREASED

This class embraces that familiar group of cases in which there is abnormal increase of resistance to the lesser circulation, with or without involvement of the left side of the heart It includes a wide variety of both functional and organic disorders It is probable that all cases of heart disease with gradually failing compensation enter this category Two persons showing slight but positive signs of mitral stenosis, perfectly compensated, have both abnormally high venous pressures while one, a large man of 40, has an arterial pressure of 112 mm, and the other, a woman of 23, has an arterial pressure of from 130 to 140 mm

In two chronic cases verified by autopsy, the obstruction was wholly between the right and left sides of the heart In one there was atrophy of the right lung with an old nearly-obstructing thrombus of the right pulmonary artery In the other there was marked sclerosis of the pulmonary artery and a pericardial effusion In the former the skin was deeply congested, and in the latter it was pale In a man of middle age coming to autopsy from uncompensated lesions of mitral and aortic valves the skin had been warm and congested, while in another patient of about 62 years with a break in compensation from mitral insufficiency the skin was markedly pale It is difficult to see how pallor of the skin co-existing with high venous pressure can be explained except as a result of spasm of the capillary vessels themselves In all these cases the venous pressure was high to very high and the arterial pressures were within normal limits

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[13] Thompson Possible Cause of High Tension Pulse in Nephritis" Trans Assoc Amer Phys 1904 vol xix p 14

Omitting consideration of such anatomic causes of obstruction to the venous circulation as are involved in emphysema of the lungs, pneumonia, etc, there is a very interesting class of cases presenting high venous pressures which, at the outset, present "functional' disorders characterized by symptoms of the gouty diathesis Their clinical features recall the statements of Balfour[14] and of Gairdner "Venous congestion, as it is usually termed, has been recognized by all physicians since the day of Galen as the first condition essential to the formation of the gouty diathesis"

Of several such cases which have been under my study one is in the person of a full-blooded active man of 55, of highly gouty heredity, who for several years has noted increasing dyspnea with exercise About six months ago there were obvious, though faint, signs of mitral insufficiency with slight cardiac dilatation The patient was greatly benefited by a course of Nauheim baths, but some weeks later complained of a feeling of tension in his veins, though the heart murmur had disappeared I found his venous pressure about double the normal, while the maximum systolic pressure was but 103 mm sitting and 112 mm recumbent

In a subsequent paragraph attention will be called to the signs of cardiac insufficiency, such as dilatation and the presence of mitral regurgitation, as arising, not primarily from high arterial resistance, but from excessive input of blood into the heart That is, the cardiac changes, whether of failure or of compensation, are brought about by heightened intracardiac pressure, not in the phase of systole, but in that of diastole of the heart

I have elsewhere called attention to reduplication of the first sound of the heart as evidence of abnormal elevation of blood pressure in the right ventricle The sign, commonly manifested by a partial splitting of the first sound, is usually well marked in this whole class of cases, especially in conditions of fair compensation

Two other cases belonging to this category deserve especial mention One, represented by a man of 30, robust in figure, with a high color, has extensive, though quiescent, tuberculous infiltration of the lungs, and is well enough to do clerical work He is extremely susceptible to "colds" and manifests other symptoms of the gouty diathesis His venous blood pressure measured about twice the normal, and the maximal arterial pressure sitting was 126 mm, recumbent about 133 mm It is worth noting, in passing that in changing from the sitting to the recumbent position the arterial pressure reached its maximum of 136 mm immediately and then gradually fell to 128 mm on resuming the sitting position the pressure fell unduly at first to 120 mm and then gradually rose to 126, the results probably chiefly represent the adjustment of the vasomotor mechanism to the strain of gravity Such graduated changes of blood pressure with change of position are not uncommon This patient's urine was high in color, specific gravity was 1030 There was no albumin, but there was a considerable sediment of casts of the hyalin and granular variety, the former being fairly dense and of medium breadth The granules were coarse and not readily dissolved by a 4 per cent. solution of piperazin and, therefore, were not uratic

The other case is that of a man of 41 who leads a professional life of phenomenal physical and mental activity He has long suffered at times from attacks which are especially characterized by pain and swelling in the small joints and in the sheaths of tendons The veins of his hands are usually distended, though the extremities are at the same time commonly subjectively cold On examination the hand veins were turgid and their valves, for the most part, were incompetent The venous pressure was considerably above normal Arterial pressure, sitting, was 124 mm, recumbent 116 to 123 mm I am told that two or three years ago this man's arterial pressure was found by a competent observer, using the Riva-Rocci instrument, to measure about 160 mm The significance of this fact will appear later

I am permitted to report the results of numerous urinary examinations made by others in this case The urine usually is of high specific gravity and contains great numbers of hyalin and granular casts, but no albumin It is a curious fact that during a recent severe attack of tonsillitis the casts completely disappeared from the urine and returned only after recovery from the disease

These cases present, so far as I know, the first evidence indicating a specific relation between gouty metabolism and nephritis marked by the appearance of casts without albumin in the urine

GROUP III THE RATIO OF ARTERIAL TO VENOUS BLOOD PRESSURE NOT MATERIALLY CHANGED, BUT BOTH PRESSURES ABNORMALLY HIGH

This class probably includes cases of all kinds characterized by plethora Thus, in a young woman with well-marked chlorosis, though the veins were inconspicuous and the skin cool, the venous pressure measured about twice the normal and the maximum arterial pressure was over 146 mm Her heart was somewhat dilated and hypertrophied

The following three cases suggest the hypothetical career of the gouty subject as it will presently be traced A somewhat robust professional man, about 40 years of age, who for years has suffered at times from typical attacks of gout and who has enjoyed immunity for ten months following a course at Carlsbad, presents a venous pressure some three times as high as normal, with an arterial pressure of 160 to 170 mm No signs of arterial degeneration are manifested A man of 57, addicted to alcohol some years ago and accustomed to strenuous physical exertion, recently became short of breath with exercise and dizzy with change of position He has a retinal hemorrhage, and his venous pressure is easily three times the normal and the arterial pressure ranged on one occasion from 188 mm sitting to 220 mm recumbent, on another from about 175 mm sitting to 188 recumbent The sclerosis which is probably present is not obvious in the visible arteries

It may be said in passing, that in four individuals with retinal hemorrhage kindly sent to me by Dr E C Rivers for examination all apparently had high arterial

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14 Balfour 'The Senile Heart p 161

pressures and at least two had correspondingly high venous pressures Finally, in a female patient of about 72, obese in figure, who for years has complained of gouty manifestations of the most varied sort, with undoubted degeneration in the larger arterial trunks and showing edema of position, the arterial pressure ranges from 200 to 215 mm, while the venous pressure is but slightly, if at all, above normal In none of the cases, except as cited, were there distinct urinary signs of nephritis nor was there any history of syphilis

A number of the cases described above seem to me to mark, like milestones, the course of the biologic career of the gouty subject, using this term as generic for an extensive group of troubles which Professor Chittenden[16] has recently described as disorders of "intermediary metabolism" Starting with a metabolic dyscrasia which pathologic chemistry is rapidly illuminating, the first physical derangement of the circulation is manifested by a positive and relative increase of the venous blood pressure. This leads to augmented inflow into the heart with tendency to increase the amount of residual blood remaining in the ventricles at the end of systole The heart may react by hypertrophy to this diastolic elevation of intracardiac pressure or it may simply dilate and its valves become insufficient The gouty subject in this stage belongs to Group 2 The hypothesis further assumes that the accumulation of toxins in the blood irritates the peripheral vessels, possibly capillaries as well as arterioles, so as to cause in them a tonic spasm This must give rise to heightened arterial pressure For a time, as illustrated in Group 3, venous pressure also remains high, possibly from associated plethora, it may be from resistance offered the inflow of blood to the heart Finally, the arteries, figurately speaking, resent the strain imposed on them and their vital tissues are replaced by insensitive matter and arteriosclerosis is established The accompanying cardiac changes, whether of compensation or degeneration, form but necessary links in the chain of events

In this connection attention may profitably revert once more to the case described at the beginning of this article The patient, a woman of 63, is a typical member of Group 1, although her arterial pressure is out of all proportion to the insignificant amount of sclerosis evident Until recent years she has been a woman of extraordinary vigor, but up to the time of her menopause she was periodically prostrated by attacks of headache, from which, since then, she has been free It is a justifiable suspicion that the recurrent headaches were but the youthful symptom of that gouty diathesis which has since developed in other directions with more palpable signs

GROUP IV THE RATIO OF ARTERIAL TO VENOUS BLOOD PRESSURE NOT MATERIALLY CHANGED, BUT BOTH PRESSURES ABNORMALLY LOW

There can be no doubt that a large variety of cases could be properly included in this group, though I have not especially followed the subject In a young man and a young woman, each recovering from an acute exacerbation of an old rheumatic mitral disturbance, the arterial pressure measured 100 mm in the one and 110 in the other, and the venous pressures were from one-half to one-third of the normal More or less of the same condition is manifested by certain members of the neurasthenic type In a patient having very high venous and normal arterial pressure whose death was unexpected and found to be due to pulmonary atheroma and pericardial effusion, the arterial and venous pressures began to fall more than twelve hours before dissolution Toward the end, even in death from mitral stenosis, the surface veins are drained, the jugulars alone becoming distended

SUMMARY

1 It is worth insisting that our knowledge of the circulation must be built up by induction from specific facts and not by deduction from general laws

2 The venous system falls functionally into two natural divisions, the somatic and the splanchnic In the superficial vessels of the former the blood pressure is easily measured and is determined partly by local causes and, in part, by the conditions of circulation elsewhere in the body The channels of the latter have a capacity capable of accommodating the entire blood mass The general arterial blood pressure is probably regulated chiefly by conditions determining the splanchnic circulation Arterial pressure is raised by contraction of the splanchnic vessels and lowered by their dilatation In the upright position blood tends to gravitate into the splanchnic area, but in the normal human subject there is a compensatory vascular contraction which somewhat overbalances the effect of gravity, so that, at least, the maximum arterial pressure is slightly higher in the upright than in the recumbent position In debilitated subjects the vasomotor compensation may be deficient and the arterial pressure is decidedly lower in the upright than in the supine position This postural draining of the blood is often evidenced by failure of the radial pulse when, in the erect position, the arms are elevated above the head In the lower animals undue elevation of arterial blood pressure is prevented by reflex inhibition of the vasomotor center for the splanchnic area, the afferent branch of the reflex arc being the depressor nerve whose peripheral filaments find their stimulus in the strain of the contracting heart The frequent failure of pulse in the elevated wrists of subjects of valvular heart disease who have high blood pressure makes it probable that an essential functional peculiarity of such disease is the development of a heightened irritability of the depressor reflex

3 Venous blood pressure may be raised either by increasing the inflow into or decreasing the outflow from the veins The former result may be attained by local exercise of the member examined, the latter by elevating one arm while the venous pressure is measured in the hand of the other

4 Muscular exercise, either local or general, increases venous blood pressure and presumably pressure within the right side of the heart

5 Intrinsic contractility of the superficial veins plays an important part in their physiology It is probably through such contraction that the valves are brought into action The natural external stimuli to venous contraction are cold and light mechanical irritation Venous pressure is lowered by cold which causes contraction of the arterioles and is raised by heat which dilates them

6 The superficial veins of the extremities normally dilate and the pressure within them increases as result of inspiration The respiratory movements of the veins correspond with the respiratory changes in arterial blood pressure. Transmission of cardiac pulsation into the veins is of frequent occurrence

7 As a result of the processes attending digestion the pressure in the veins of the hand sometimes falls, at

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[16] Chittenden "Some Problems of Intermediary Metabolism," the Shattuck lecture 1903

others rises The former result is probably a sign of most perfect physiologic compensation The rise of venous pressure during digestion is probably due not to increased inflow from the capillaries, but to elevation of pressure within the right auricle, due to excessive input of blood from the splanchnic system It may be looked on, therefore, as a sign of relative physiologic weakness

8 Cases of disease which involve the apparatus of the circulation, when compared with normal subjects, can be naturally distributed among four distinct classes (a) The ratio of arterial to venous blood pressure is increased This is due to positive elevation of arterial pressure produced in some cases by disorders such, possibly, as vasomotor spasm or increased viscosity of the blood or in others by arteriosclerosis (b) The ratio of arterial to venous blood pressure is decreased This is usually due to positive elevation of venous blood pressure either by physical obstruction to the output from the right heart or by functional changes involved in the so-called gouty diathesis Abnormally high venous blood pressure, not accounted for by mechanical causes, is a clinical sign of disorder of intermediary metabolism (c) The ratio of arterial to venous blood pressure is not materially changed, but both pressures are abnormally high Such a condition is found in general plethora, also persons in a certain stage of the gouty dyscrasia belong to this class (d) The ratio of arterial to venous blood pressure is not materially changed, but both pressures are abnormally low Cases of simple asthenia probably mostly fall within this class The condition has been noted in individuals recovering from a break in compensation attending mitral insufficiency

Although one and the same subject may, at different stages in the development of his dyscrasia, as in gout, occupy a place now in one, now in another of these classes, the discernment of the circulatory attributes by which the allotment must be made on any specific occasion, is of the utmost pathologic interest and therapeutic importance [17]

DISCUSSION

Dr. S J Meltzer, New York City, said that the fall of the blood pressure during each inspiration can be explained as being due to an inhibition of the vasomotor centers The distension of the lung during each inspiration which causes an inhibition of the inspiration causes at the same time also an inhibition of the other centers of the medulla oblongata

Prof W P Lombard, Ann Arbor, Mich, stated that he has done considerable work along this line He believes that we are not dealing here with mechanical effects The peripheral blood vessels are influenced by the vasomotor nerves, and are acted on by the vasomotor as well as the respiratory center He has watched a little mirror resting on the veins on the back of the hand, and has seen a point reflected in it fluctuate rhythmically It moved forward and back at intervals of from 7 to 14 seconds, then stopped for a time, and then started again, often with a jerk

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[17] More than 125 persons have been investigated in conducting these researches I am indebted for assistance to numerous friends and students of whom special mention may be made of Dr Shuler Craft and Messrs C C. Fuson and R B Blotz.

Supply and Demand—It requires no argument to show that the medical profession is overcrowded There are many successful men who are overworked, and there are many unsuccessful ones who would be underworked if they were the only doctors in a town of ten thousand each, but the great majority of physicians are directly influenced by the law of supply and demand, and there is no question but that each average physician could take care of at least twice the population that now falls to his lot.—*Medical Times*

THE TREATMENT OF THE INTRACRANIAL COMPLICATIONS OF MIDDLE-EAR SUPPURATION *

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The statistics given in this paper are taken from my own operating book, it being my purpose to record here simply personal experiences and to deal very little with the general literature of the subject, owing to the small time allotted for the discussion of so important a topic

The intracranial complications which may follow a middle-ear suppuration are, first, epidural abscess, second, brain abscess, third, sinus thrombosis, and, fourth, general meningitis The meningitis may be either of the serous or the purulent type

From my own private statistics I can report 40 cases of epidural abscess, 14 cases of brain abscess, 44 cases of sinus thrombosis and 5 cases of general meningitis This list refers simply to cases operated on Of course, some cases of meningitis were met with which were considered inoperable, but these statistics deal simply with cases operated on.

Of the 40 cases of epidural abscess, 4 died one of pneumonia, secondary to sinus thrombosis, two of general meningitis—in one of these cases the meningitis occurring over one month after the evacuation of the epidural abscess—and one of diabetes

Of the 14 cases of brain abscess, 10 were located in the tempero-sphenoidal lobe, and of these 4 were cured and 6 died The 4 remaining abscesses were located in the cerebellum, and all of these cases terminated fatally

There were 44 cases of sinus thrombosis, of which 10 died and 34 were cured Of the 44 cases the internal jugular was not excised in 28, and of this number there were only 4 deaths The causes of death were as follows One died of pulmonary thrombosis, one of diabetes, one of septic pneumonia, and in the remaining case the cause of death is unknown Of the 16 cases in which the internal jugular was excised, 10 recovered and 6 died The causes of death in these cases were as follows One died of hemorrhage into the spinal canal, one of general pyemia, which condition was present before the operation was performed, a pneumonia coincident with the acute middle-ear inflammation rendering operation absolutely impossible until a very late date, two died of double pneumonia, one of gangrene of the lung and one of gangrene of the tissues of the neck

Of the 5 cases of general meningitis operated on, one recovered as the result of subdural drainage, in the 4 remaining instances, treated both by subdural and ventricular drainage, death followed in every instance These statistics would go to show that both epidural abscess and sinus thrombosis are conditions which are not ordinarily attended by any great mortality if subjected to operative interference early

Out of 40 cases of epidural abscess, in only two was death due to general meningitis This would seem to indicate that in epidural abscess Nature makes an effort to wall off the area of meningeal inflammation from the general cranial cavity and thus effect a spontaneous cure The possibility however, of late infection of the general meninges in these cases must be borne in mind This is evidenced by one of the fatal cases reported, in which the general meningitis did not make its appearance until the mastoid wound was practically healed It is probable that where a fatal meningitis occurs at such a late period the meningitis is due to infection through the wound In the case cited, the patient had been treated at the dispensary and her hygienic conditions at home were not of the best There was abundant opportunity for reinfection of the wound while at home

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* Read in the Section on Laryngology and Otology of the American Medical Association at the Fifty seventh Annual Session June 1906

Regarding the treatment of these cases of epidural abscess, very little need be said It is simply necessary to evacuate the pus and to expose the infected area freely by removing the overlying bone in every direction until firm dural adhesions are reached I do not advocate the removal of bone until healthy dura is seen, as there is danger of reinfection of this healthy dura The bone should be removed until the line of adhesion between the dura and bone can be made out, in other words, the entire abscess cavity should be exposed but exploration should not go beyond this point Simple packing of the wound with either iodoform or sterile gauze completes this operation

In considering the cases of sinus thrombosis, in 28 out of 44 cases, in which it was not necessary to excise the internal jugular, death resulted in but four instances In other words, sinus thrombosis recognized early and operated on early will be almost certainly cured It might be argued from the causes of death in the four fatal cases in which the jugular was not excised, that excision of the jugular would have prevented the fatal termination This may possibly have been true of the case dying of pulmonary thrombosis, although I think that such a conclusion would be rather far-fetched In the case where the septic pneumonia was the cause of death the pneumonia would certainly not have been averted by ligation of the jugular, while ligation of the jugular in the case of the patient dying of diabetes certainly could not have prevented the fatal termination

Of the 16 cases in which the internal jugular was excised, a fatal termination followed in 6 In the 2 cases dying of double pneumonia and in the one dying of gangrene of the lung, pulmonary infection had already taken place before the cases came under observation In the case dying from hemorrhage into the spinal canal the cause of death was entirely independent of the condition of sinus thrombosis, and consequently the case should not be considered a fatal case of sinus thrombosis In the case dying of gangrene of the neck the systemic infection was present from the incipiency of the disease, and, although jugular excision was performed as soon as the symptoms indicated involvement of the vein, the operation failed to save the patient's life

We are brought here face to face with a very important question and one which has been the subject of much discussion, that is, whether in every case of sinus thrombosis we shall place a ligature around the internal jugular prior to opening the sinus, or whether we shall follow the older practice of exploring the lateral sinus first and resort to excision of the internal jugular in case this seems to be demanded by the condition of the sinus Much is to be said in favor of each plan of procedure. Personally I do not believe that it is necessary to place a ligature about the jugular as a preliminary step in every case where we wish to explore the lateral sinus, or in every case where we find a clot within the sinus

My own plan of procedure is to expose the sinus from a point just above the bulb to a point well beyond the knee exposing at least an inch and, better, an inch and a half of the lateral sinus Pressure on the sinus at its lower portion is then made and the sinus opened If a clot is found, this is removed by means of the curette, the incision in the sinus wall being gradually extended backward until free hemorrhage occurs from the torcular end of the sinus If necessary the bony covering of the sinus is removed as far back as the torcular As soon as free hemorrhage occurs it is checked by means of pledget of iodoform gauze inserted between the sinus wall and the skull Pressure is then removed from the lower end of the sinus, and if free hemorrhage does not occur from below a curette is inserted into the sinus and the clot removed from the bulb, care being taken, prior to this procedure, to apply pressure on the internal jugular in the neck so as to prevent the possible entrance of air into the vein If the removal of the clot from the lower end of the sinus is followed by free hemorrhage, this is taken as presumptive evidence that the jugular bulb does not contain a clot This free hemorrhage is, by no means, absolute evidence that there is not a clot in the jugular bulb, and that such a clot may not extend downward into the vein From the series of cases reported, however, in which this plan has been followed, it must be conceded that this view is well taken In fact, I have seen several cases in which free hemorrhage did not take place from below, and in which the jugular was not interfered with, recover completely after clearing out the clot from the sinus Free hemorrhage occurring from below, a plug of iodoform gauze is inserted into the lumen of the sinus, packed firmly down into the bulb, and the remainder of the wound dressed in the ordinary manner If hemorrhage does not take place from the bulbar end of the sinus, I believe that the surgeon should always proceed to excise the jugular immediately, unless the condition of the patient does not warrant this procedure, or unless the case has been under observation for only a few hours, and has shown no evidences of general septic infection In either of these events it is better to return the patient to bed for a few hours, allow him to rally from the shock of the first operation, and subsequently to excise the jugular, if necessary In cases where the general condition of the patient is good, jugular excision should be performed at the first operation, if free hemorrhage does not take place from the bulbar end of the sinus

In performing the operation it is well to place the initial ligature about the vein as low down as possible The vein is most superficial just beneath the omohyoid muscle In some cases, however, it is necessary to ligate the vein lower, that is, just above the clavicle, and in two instances, I have placed a ligature about the vein less than half an inch above the innominate vein The excision of the vein should be complete from its lower point of section to a point as close to the base of the skull as possible I usually divide the upper end of the vein well above the posterior belly of the digastric muscle All tributary veins must be divided between two ligatures during the procedure of excision Any enlarged glands lying along the course of the vein and in severe cases these glands are always present, should be thoroughly removed

It has been my own practice to close the wound in the neck by interrupted sutures in all of these cases except where very severe infection of the cervical tissues is present The tissues of the neck are not sutured layer by layer but the sutures are passed simply through the skin and the dead space in the neck is drained either by a wick of iodoform gauze or by a thin cigarette drain The upper portion of the wound at the base of the skull, where the upper end of the jugular is divided, is left open, and a strip of iodoform gauze is carried down to the severed jugular, so as to drain thoroughly the upper portion of the wound and to prevent infection of the lower portion from above Primary union has taken place in over 50 per cent of these cases

The results of operative treatment in brain abscess are much less satisfactory than are those in the conditions which we have already considered My own statistics show but four recoveries out of fourteen cases This, of course, is a very high mortality The diagnosis of brain abscess is, in many cases, so obscure that the abscess is only evacuated at a very late date Where localizing symptoms are present, such as aphasia, sensory or motor paralyses, or cerebellar symptoms, the surgeon may be able to locate the abscess with a certain amount of exactness In a very large proportion of cases, however, the diagnosis must depend on indefinite symptoms, such as persistent headache or sleeplessness, a septic temperature in cases of acute abscess, or a persistent, subnormal temperature, in cases of chronic abscess, general emaciation, and in some cases, optic neuritis The blood count in these cases is of considerable value in arriving at a diagnosis We almost invariably find an increased percentage of polymorphonuclear cells on examining the blood If suppuration in every other part of the body can be excluded and there is a history of aural suppuration, such an increase in the polymorphonuclear cells, together with other symptoms, would warrant the surgeon in exploring the cranial cavity

The majority of abscesses of otitic origin are located in the temporo-sphenoidal lobe The next most frequent site is the cerebellum, and I have seen one case where the abscess was situated in the second frontal convolution

In exploring the temporo-sphenoidal lobe the surgeon may expose the dura either by removal of the tegmen tympani, or, after removing all foci of suppuration from the middle ear, the temporo-sphenoidal lobe may be explored through the squamous plate of the temporal bone Unless at the time that the mastoid operation is performed there is caries of the tympanic roof, and removal of this carious bone exposes diseased dura, I do not think that the tympanic roof should be the site chosen for the exploration of the temporo-sphenoidal lobe If diseased bone is found in this region, naturally the surgeon would follow up the path of infection to the meninges, and through these to the brain substance In the absence of such signs, however, I believe that in the evacuation of a temporo-sphenoidal abscess the brain should be exposed by an appropriate incision made above the zygoma The cranial cavity is easily entered at this point, a large area of bone can be quickly removed by means of the rongeur, the dura quickly exposed and incised, and the brain substance explored in every direction After an opening has been made above the zygoma, it is then perfectly feasible to remove the roof of the middle ear and mastoid cavities, thus enlarging the exposed dural area

For exploring the brain a long, sharp, narrow-bladed knife is the best instrument or some prefer a grooved director If the knife is used, incision should be made parallel to the convolutions, rather than across them, so as to avoid unnecessary hemorrhage As soon as pus is encountered either by the knife or the director, a long narrow-bladed retractor should be slipped along the exploring instrument until the abscess cavity is entered Gentle traction should then be made on the brain and the second blade of the retractor should be slipped into the cavity and the retractors separated In this way the operator is able not only to thoroughly evacuate the abscess, but to also obtain a fairly good view of the interior of the cavity

This procedure appeals to me rather more than does the introduction of the encephaloscope for purposes of exploration I much prefer the cautious introduction of a sterile finger into the brain abscess cavity, to the introduction of the encephaloscope

I am not in favor of washing out these abscess cavities at the time of operation unless, on examination, there seems to be a fairly dense wall to the cavity Under these circumstances, the cavity may be washed, either with a weak bichlorid solution or a normal salt solution

The method by which these cavities are to be drained is a matter of great importance In three of the successful cases reported the cavities were simply packed lightly with either sterile or iodoform gauze In one of the successful cases gauze was inefficient, and the patient made a prompt recovery when rubber drainage tubes were substituted for the gauze At present I believe the best method is to introduce a rather large cigarette drain into the cavity, on the removal of the cigarette drain the walls of this canal will be found to be fairly firm The cavity can then be easily cleaned under direct illumination through the encephaloscope, and the cigarette drain can either be replaced or the cavity packed lightly with boric acid gauze, sterile or iodoform gauze, according to the choice of the operator

From the experience of McEwen and others, it would seem that the less frequently these abscesses are disturbed or redressed, the better I must say that in my own cases, however, the dressings have been changed either daily or every second day The cause of death in my cases has invariably been a general meningitis In some of these the infection was clearly through the subdural space, in others through the ventricles

With reference to the exploration of the cerebellum, the cranial cavity may be opened either just below the superior curved line, the opening being first made with the chisel and then enlarged with the rongeur, or the mastoid wound may be simply extended backward so as to expose first the lateral sinus, and then the cerebellum The cerebellar fossa is undoubtedly more easily opened by the elevation of a flap of pericranium, so as to expose that part of the occipital bone lying beneath the superior curved line The anterior border of this flap should correspond to the incision for opening the mastoid, the posterior border should be close to the median line In this way, after the cranial cavity has been entered, the bone may be removed forward toward the mastoid wound until the exploratory opening and the mastoid wound are joined This gives a very large field of exploration, and enables one to carry on exploration with the utmost thoroughness The only drawback to the procedure is the profuse hemorrhage which occasionally occurs from the emissary vein This, of course can be readily checked by plugging the foramen with a bit of sterilized wood If the vein is large however, it is rather difficult to expose that portion of the cerebellum lying just posterior to the sinus It is for this reason that in most cases I prefer to enter the cerebellar fossa behind the mastoid foramen rather than to work backward from the original mastoid wound

The technic of draining a cerebellar abscess is precisely the same as that described in speaking [illegible] temporo-sphenoidal abscess

The treatment of an otitis meningitis is, perhaps, the most unsuccessful problem with which the otologist has to deal Otitic meningitis may be either of the purulent or serous variety

These cases, however, are not entirely hopeless I have already reported, before the American Otological Society, a case of otitic meningitis which recovered after subdural drainage At the Seventh International Otological Congress at Bordeaux, Lermoyez[1] has reported two cases of otitic meningitis, the one cured by the complete radical operation with craniectomy and lumbar puncture, and the second relieved by radical operation, craniectomy incision of the dura mater and repeated lumbar punctures The generalizations of Lermoyez are exceedingly good He believes, first, that the purulent focus in the midle ear should be thoroughly cleared out, second, that intracranial pressure should be relieved by means of repeated lumbar punctures Failing in this, that a sufficient area of the skull should be removed to relieve intracranial pressure rapidly followed by incision of the brain substance, in case the symptoms persist

In my own practice, I have followed all these suggestions, that is, I have employed lumbar puncture, craniectomy, subdural drainage and ventricular drainage In only one case has operative treatment been successful, namely, a case of chronic suppuration in which subdural drainage was employed.[2] In a few cases, where ventricular drainage was resorted to, the symptoms temporarily subsided, only to recur after a short time, and in all instances, a fatal termination followed I am inclined to believe that the best plan of treatment is to relieve the pressure first by early lumbar puncture in cases of meningitis, and, failing in this, to relieve the increased pressure by a free craniectomy, followed by incision of the dura and of the cerebral substance If the ventricles contain much fluid ventricular drainage will be established without any special effort on the part of the operator If ventricular distension is not sufficient to admit of their free drainage after brain substance has been penetrated for a distance of an inch, I am inclined to believe that it is better surgery simply to incise the brain substance, and relieve tension in this way, rather than to attempt to drain the ventricles by deeper incision

In cases of otitic origin, the region chosen for exploration in craniectomy is usually that region just above the external auditory meatus Here the descending horn of the lateral ventricle lies at about a depth of an inch and three-quarters below the surface of the temporo-sphenoidal lobe, that is, I am speaking now of normal conditions, and where the ventricle is distended with fluid the brain substance is compressed and the ventricular cavity opened before the brain substance is penetrated to this depth If the ventricle is opened, I believe that a cigarette drain inserted into the ventricular cavity affords the most perfect form of drainage

Otitic meningitis, either of the purulent or serous variety, is, apparently, the condition which has most baffled the efforts of the surgeon. While the results of operative treatment are far from encouraging, I believe that it is only by persistence along these lines that the condition will finally be controlled. Better technic and perhaps earlier operation, will undoubtedly save many cases which were formerly considered hopeless

DISCUSSION

DR CHARLES BALLANCE, London, England, said in regard to the varieties of meningitis that there are cases of meningitis serosa, cases of tuberculous meningitis and cases of suppurative meningitis He thought this is the best classification because the various forms of meningitis which produce suppuration can not be very well separated Meningitis serosa often occurs in relation to acute mastoid cases and the symptoms are characteristic, they are a rise of temperature, slowing of pulse, vomiting, drowsiness, stability of the pupil and some redness of the optic disc. The condition can be relieved at once by lumbar puncture, which in many cases ought to be employed more than it is In meningitis serosa lumbar puncture may save some patients from meningitis purulenta, hence it is an operation to bear in mind With regard to cases of tuberculous meningitis which arise from infection of the temporal bone, he had reported one case in which there was vomiting, squint and paroxysmal headache, as a sequence of tuberculous disease of the temporal bone. The patient recovered entirely after complete ablation of the local disease The question arises, Can anything more be done? He thought there ought to be drainage of the subarachnoid space, not of the subdural space, and provision for drainage from the ventricle In suppurative meningitis, to which Dr Dench referred, a remarkable series of cases has been published In one case the patient was dying of suppurative meningitis, and the operator exposed the occipital lobes, opened the subarachnoid space and introduced gauze drainage Whether he opened the ventricles or not Dr Ballance did not know At any rate, after a desperate illness, this patient entirely recovered Methods for treatment of purulent meningitis are encrusted with conventionality In many cases of suppurative meningitis the infected meningeal spaces ought to be drained by means of operation, also an antitoxic serum which corresponds to the organism that has produced the suppurative meningitis within the skull should be employed

Another question Dr Dench referred to was treatment of abscess of the brain. Dr Ballance disagreed with him in the statement that temporosphenoidal abscess is twice as frequent as cerebellar abscess The experience in two hospitals in London is that cerebellar abscess is twice as frequent as temperosphenoidal abscess Brain abscess being much more frequent in the young than in the old the posterior fossa is more often involved than the middle fossa With regard to treatment of brain abscess, the pathway of infection from the meninges into the brain is the pathway through which drainage should be effected When the infection has crossed the meninges and reached the cortex, it is unable to produce a very wide destruction in the cortex because the cortex is vascular and is rich in connective elements Consequently, as a rule, there is a rather narrow channel through the cortex by which the infection passes from the meninges into the white matter In the white matter this condition is reversed and dissolution of the white matter is widespread The ideal surgical treatment is to drain the abscess through the stalk By that means the difficulties surgeons have to combat in securing good drainage of an abscess in the liquid texture of the brain are entirely overcome, the patient gets well rapidly and there is no danger of meningitis Another point Dr Dench spoke of is venous infection. Infection of the great channel of the lateral sinus commonly occurs, and the first indication of danger is not clotting of the blood, but the decomposition of the clot. Dr Ballance maintained that clotting in the sinus is an effort of Nature to prevent the extension of the disease, and therefore that it is distinctly beneficial, and the question whether the vein should be dealt with or not is a question of what organism is going to infect the clot. Is it one that will produce a local abscess if injected into the arm, or is it an organism that will produce a spreading gangrenous cellulitis if injected into the arm? If the organism is a cause of local suppuration that abscess, when present in the sinus, can be incised, and there is no fear but that the patient will get well If the organism is a cause of spreading infection there will be a spreading septic clot, which may even reach the heart Under the latter circumstances it is the duty of the surgeon to deal with the internal jugular vein, and he thought the best plan is to divide it as low down in the neck as possible and to ligature all its tributaries, and then to bring it out in the highest part of the neck incision and suture it there Why cut it off at the base of the skull? Within the vein there must be infection The wound in the neck in a certain number of cases would not become infected if the internal jugular were used as a drainage tube

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[1] Transactions Seventh Int. Otological Congress Bordeaux, 1904 p 348

[2] Transactions of the American Otological Society 1906, vol. vi, p 315

As to the time of operation, if there is doubt as to the type of infection, he would say do the operation One of his first cases published in 1899 interested him much with reference to the question whether the mastoid and vein operation should be done first One night he was called to a nurse, whom he knew, who was about 25 miles from London He found her in a cottage, and he had very few things with him, but with a knife which he borrowed and with some silk threads he tied the internal jugular vein He put her in a carriage and drove her to London to a surgical home, and at 5 30 the next morning did the complete mastoid operation, turning out a suppurating clot from the sinus as far back as the protuberance and completing the operation on the vein She convalesced rapidly The ligation of the vein before the journey may have prevented the occurrence of septic pulmonary embolism

Mr Hamilton A Ballance, Norwich, England said that one very interesting case of lateral sinus pyemia, which illustrates the use of antitoxic serum in these cases, was that of a woman who had an otitis and subsequently lateral sinus pyemia, on whom he operated in the usual way, and she was very gravely infected She had abscesses in the kidney in two joints, in one tonsil and in the subcutaneous tissue From every one of these abscesses the *Streptococcus pyogenes* was obtained The effect of antitoxic serum in this case was marked She also had an attack of facial erysipelas due to the streptococcus He believed the use of the antitoxic serum in this case was the means of saving her life

Dr N H Pierce, Chicago said that it is very difficult to make a differential diagnosis in many cases between septic purulent meningitis and serous meningitis Even the fluid which is drawn off in lumbar puncture may give very little evidence as to which kind of meningitis it is and the only way to make a diagnosis sure is to wait, if it is serous meningitis the patient gets well immediately, but if it is septic meningitis the patient is pretty sure to die Therefore, all cases of meningitis should be treated as if they were serous in character Lumbar puncture should be made very early and sufficient fluid drawn off for bacteriologic, microscopic and chemical examination, and not only that, but a sufficient quantity to relieve the pressure within the meningeal spaces Yet patients recover who have the most apparently hopeless cases of septic meningitis He reported a case of septic meningitis in a child 10 years old, which resulted in recovery, about a month after an operation for mastoid abscess, whose temperature rose to 107 5 This patient recovered with drainage through the arachnoid spaces, after a prolonged course He had used the streptococcus serum in a number of these cases, not only in sepsis arising from ear diseases, but sepsis arising in other parts of the body, for instance, in a case of laryngeal phlegmon, with absolutely no apparent beneficial results The matter of streptococcus serum is an unknown quantity at present The chances are there are many germs which have the morphologic qualities and characteristics of the streptococcus, but which vary in their intrinsic nature very much, that is the only way the variance in the results following the use of antistreptococcus serum can be explained, obtained by different observers Regarding the treatment of the jugular bulb and sinuses, he believed the jugular should not always be tied in these cases nor the sinus opened for purely exploratory purposes If the process going on in the sinus from the wound can be controlled, tying the jugular is unnecessary He believed that the jugular should first be tied whenever a curette is to be introduced down toward the bulb or when the bulb is to be exposed or when the wound is not co-extensive with the thrombus In marked general symptoms of sepsis the jugular should be tied when the thrombus is palpable and approaching to the bulb

Dr. F L. Jack, Boston, spoke of one minor point to be considered in the treatment of brain abscess, that is, the methods employed for the establishment of drainage It seems to him drainage is most important, and in his experience gauze has been very efficient, acting very much as a rubber stopper would in the sinus leading to the abscess He thought that was the only dressing that could be employed at a time when he had a number of cases, and they resulted fatally without exception He discovered that the cause of death in some of the cases was lack of drainage, and he determined that in the next brain case he would insure perfect drainage He used the old fashioned rubber drainage tube, which he does not suppose is used at all in these days, and the patient recovered Since then he has employed this open method, has avoided using gauze in every case, and has had very much better results Gauze ought not to be used for drainage in brain abscess He differed a little from Dr Dench in the statement that an opening through the attic tympanum is insufficient to drain properly the temperosphenoidal abscess It may be insufficient in some cases, but in his hands in three or four cases it had been entirely sufficient It had enabled him to remove the bone from the roof of the attic tympanum and the roof of the auditory canal, to find almost the spot where the inflammation extended from the attic through the bone and through the dura, and he had been able with the small knife Dr Dench described in two cases to find the exact spot and put the knife into the abscess cavity In these cases he found it simple enough He trephined the bone and opened from the squamous portion, and had two or three patients recover One instance of recovery from suppurative meningitis was unique, and up to two or three years ago a similar case had not been in the City Hospital He was called to see a man moribund, having a history of suppurative middle ear disease and extension of pus into the cranial cavity, undoubtedly a meningitis, from all symptoms The man was *in extremis* and he declined to operate, the conditions at the house being unsatisfactory The man, Dr Jack learned afterward, recovered A year after that he had an inflammation in the other ear and a meningitis which killed him At the autopsy the remains of the meningitis on the opposite side were found

Dr E. B Dench, New York City, referring to what Mr Ballance said about streptococcus serum, said that in one of the fatal cases he had reported the streptococcus serum was used without benefit. The method of entering the cranial cavity must depend on the nature of the case

TUBERCULOSIS OF THE MIDDLE EAR AND MASTOID *

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In this paper I shall report a few cases of tuberculosis of the middle ear and mastoid, all drawn from private practice and observed over a considerable period of years Of course, under the favorable circumstances of private practice we may expect a more favorable prognosis, both from the increased vitality of cases treated under such favorable conditions and from the fact that the hygienic surroundings can be made as perfect as possible Still the general conclusions of this paper are true as regards a great many hospital patients seen in the last 16 years as well as the few cases herein reported

I am sure that cultures taken with special reference to the bacillus of tuberculosis as a routine measure in a large series of cases will show a large number of such infections, which clinically show no diagnostic symptoms. They constitute the majority of the severe mastoid cases seen in infants. It is, of course, decidedly more difficult to isolate the tubercle bacillus than the ordinary septic organisms commonly seen and the absence of the bacillus can not be regarded as proof positive of the absence of the disease unless the pus or other septic material is injected into a guinea-pig and the results noted, but in the the extreme cases there can be no doubt as to the diagnosis, without culture, from the unmistakable clinical signs.

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* Read in the Section on Laryngology [illegible] American Medical Association, at the Fif[illegible] June 1906

First and most important of such symptoms in my experience has been the appearance of a small glandular swelling in front of the tragus either before or coincident with a middle-ear discharge. This gland is free from parotid involvement in its early stages, but later comes parotid and subzygomatic induration with or without local abscess formation and in extreme cases after weeks or months the formation of postural abscess and infection of the glands in the neck. In the severe type the process is very apt to begin in the middle ear or temporal bone and to be attended by an early facial paralysis on the affected side and later by the formation of large sequestra either of the mastoid or petrous portion or both. In this case the ossicles are apt to slip out easily and may be often found in the syringing fluid, and there may also be tuberculous processes in other bones of the body. The clinical picture thus presented, in the extreme cases, of the early parotid swelling and subzygomatic induration following or prior to the discharge of the ear in infants or young children and followed by facial paralysis, postaural abscess and general infection of the glands of the neck, with malnutrition and emaciation is so typical that the diagnosis can be almost always made by a superficial observation. The prognosis in such a case without operation is absolutely bad, although a few undoubtedly recover after sequestra are formed and the process thus self-limits itself. Many die from exhaustion due to general septic infection, malnutrition or tuberculous involvement of other parts of the body, especially general miliary tuberculosis or tuberculous meningitis. I will endeavor to show by this series of cases that these bad results are rare under treatment, even in extreme neglected cases. Much more commonly seen than these severe infections is an infection of the middle ear without involvement of other tissues or of the mastoid, evidently proceding *via* the Eustachian tube and generally, though not always, a complication of pulmonary tuberculosis. Here the process begins with the general appearance of an ordinary otitis media acuta with a red, infiltrated membrane, but without very much pain or general systemic disturbance. This perforates itself and until it becomes infected by other organisms the discharge is of a sero-sanguinolent character. The perforation rapidly enlarges in these cases and involves the malleus and incus until these two ossicles are completely necrosed so that they fall out or come away in syringing the ear.

It has been my experience that it is impossible to check one of these cases short of the complete destruction of the membrane and partial destruction of the malleus and incus.

I cite two typical cases of this class of infection.

Case 1.—P., healthy looking boy, aged 5½ years, was first seen on Nov. 7, 1903.

History.—There was well marked tuberculous history in his family, but he did not at this time, nor has he at any time since, shown any signs of any other tuberculous infection.

Examination.—His left ear was normal, his right ear showed a double perforation anterior and posterior to the malleus with a slight serous discharge.

Treatment.—The ear was put on dry treatment with the use of boric acid powder. The perforation rapidly increased in size under treatment and destroyed about half the malleus and the whole of the incus in the course of about one year's time.

A culture taken from the discharge of the middle ear showed tubercle bacillus. As soon as this diagnosis was made treatment was changed to wipe dry and powder with a combination of iodoform and boric acid, equal parts. The ear gradually stopped discharging after this treatment had been faithfully carried out three months. This child has been seen within three months with a recurrent discharge from this ear which still showed tubercle bacillus, the ear having been perfectly dry prior to this time for more than six months.

Present Condition.—The condition now is a large perforation showing the head of the stapes, smooth membrane of the middle ear without granulation and about half the malleus hanging down without any membrane attached to it. The boy is now 9 years old and in splendid health. He has been out in the open air for five months without any impression being made on the discharge of the ear.

Case 2.—S. C., aged 20 years, had been in Texas with pulmonary tuberculosis and the process had been supposed to be checked.

Course of the Disease.—Patient was first seen in 1900 with what was apparently an ordinary acute inflammation of the middle ear. This rapidly increased until without pain the process had destroyed the drum, malleus and incus, after which the ear ceased discharging and has now been dry nearly three years. Tubercle bacillus was isolated in this midlle ear also, the pulmonary process is apparently checked and the patient has been at work in the North for three years and is in good general condition.

As illustrating the severer type of tuberculosis the following may be of interest.

Case 3.—M. R., aged 4 years, lived in a suburban town, one of a large family of children, all the other members of the family in good health.

History.—First seen in 1895. A family servant had pulmonary tuberculosis and had remained some months in the house before the diagnosis had been made. When this child was first seen his general condition was excellent. He had a discharging ear, with a postaural abscess perfectly painless to pressure and not red.

Operations.—The first operation performed was done by the family practitioner, who merely opened the abscess. About two months after this the discharge from the abscess was very foul and I did a mastoid operation, removing a large sequestrum comprising most of the mastoid portion of the temporal bone.

Postoperative History.—Within a year a sequestrum comprising a portion of the cochlea, a carious malleus, a tuberculous sequestrum of the lower end of the radius and a portion of one rib had been removed at successive operations. The total length of time of the extension of the process was about three years. He lived largely out of doors and has had no trouble of any sort for about five years. He is now about 15 years old and in good physical condition.

Case 4.—N., aged 1½ years, was first seen in 1896.

History.—This baby's aunt had a very rapid pulmonary tuberculosis and had been very much attached to the child, often held it in her lap and kissed it, the family not recognizing the danger of such procedure. The child lived in an apartment in a suburban city under only fairly favorable conditions. The child first showed a cold abscess over the mastoid before the discharge from the middle ear was noticed.

Operations.—Between the time the child was 1½ and 5 years of age five successive operations were performed, two on the mastoid, one on a tuberculous sequestrum in the forearm and one for the removal of the last phalanx of the toe, and the process microscopically was diagnosed tuberculous in each instance.

Postoperative History.—The ear did not stop discharging until the child was 8 years old, when sequestrum was removed from the external auditory canal comprising a considerable portion of the cochlea This child is now also in excellent condition and has no sign of tuberculous process anywhere

CASE 5—T P, aged 7 months, lived on a large estate in the country and had never been in a city or public conveyance of any kind since he was born

History—The parents were both healthy There was no tuberculous history in the family The child lived inland at an altitude of about 400 feet and under the most perfect hygienic conditions, but a family servant had tuberculosis and had been allowed to remain on the place until she died, although not in the house occupied by the child Another possible source of infection in this case was afforded by a sick horse recently imported from Texas This horse was shot for some gland disorder, but not before two of the grooms had become infected with large glands, the extent of which I do not know When first seen this child showed a discharge from both middle ears, with numerous granulations, swollen parotid on both sides, postaural abscess on one side and innumerable gland masses in the neck, some of which had broken externally and were discharging pus The first point of infection noted in this child had been the to me very characteristic one spoken of before of the small gland anterior to the tragus

Operations—This child was operated on almost persistently for two years I did two mastoid operations on it and removed 16 glands from one side of the neck, exposing the internal jugular for about 1½ inches, a general surgeon removed 18 glands from the other side of the neck and a portion of one rib The child suffered badly from malnutrition, and when it was nine months old it weighed only one pound more than its birth weight It was kept in the open air for two years during this operative period The process in both middle ears was also destructive and the malleus and incus in one ear and the malleus in the other ear came away in the syringing fluid.

Present Condition—This child is now 4 years old and except for its innumerable scars and pretty decided deafness, he is as healthy a child as one would wish to see The middle ears are both dry

CASE 6—A more recent case and one to illustrate what surgery may do even in the most desperate conditions is that of a 10 months old baby seen last October for the first time

History—This child weighed only 9 pounds 8 ounces and presented clinically infantile atrophy It weighed 7 pounds at birth The source of infection was not known, but the right ear began to discharge at three months, followed almost immediately by a well marked parotid swelling which shows at the present time The facial nerve was paralyzed, within five weeks there was involvement of the glands of the neck, many suppurative, and there have been five or six operations for their removal Before I saw it a postaural swelling developed

Operation—There was a question in the mind of the attending physician whether the child would survive etherizing, as it had nearly died from collapse following one of its operations, but it seemed to me wise to give the child the benefit of the doubt It was etherized and two large tubercular sequestra removed The child stood the operation well and the mastoid wound healed rapidly The temperature came down nearly to normal, once previously having been 101 to 102 degrees

Present Condition—The middle ear is still discharging somewhat. The glands of the neck have nearly all disappeared, the facial paralysis still remains The child gained two pounds the first month following the operation and now weighs 15 to 16 pounds and will, in my opinion, go on to complete recovery It has been kept in the open air through the whole of the last winter, but has remained in the town where it was born

I merely wish to prove by the history of this case that no matter how severe the tuberculous infection, the bone lesion limits itself very easily and if the process is attacked wherever it may manifest itself that ultimate favorable result may be obtained, provided the knife is resorted to freely and frequently And further, that the prognosis in fact of the tuberculous process in the neighborhood of the ear is fully as favorable in infants, if not more so, as the prognosis of the ordinary septic process commonly causing mastoid diseases in children

Of course, combined with the special surgery, such a case needs hygienic surroundings, the best of food and open-air treatment, but as far as my experience goes such open-air treatment will be just as successful in the immediate vicinity of Boston as it will be in Maine or the Adirondacks The immediate treatment is confined to the use of nourishing food and tonics, but much improvement can be obtained in the middle ear processes by the use of dry treatment and iodoform powder and by the use of iodoform powder and gauze in all the open wounds These cases are the only ones which, in my experience, show marked improvement by the use of iodoform gauze instead of plain gauze

298 Marlboro Street

DISCUSSION

DR STERLING RYERSON, Toronto, said that his experience has been disastrous In some cases under observation, disease in the middle ear has been the primary or initial symptom in connection with tuberculosis, and in other cases there has been manifested the ordinary pulmonary tuberculosis followed by a condition in the middle ear He thinks that all the text books say that tuberculosis of the middle ear is a rare disease He read an article in the *Annals of Otology* in which it is stated that out of 100 cases of discharge from the middle ear 64 had the tubercle bacillus Very few physicians in practice investigate the discharge from the middle ear, and Dr Ryerson would not be surprised if the condition were found to be much more frequent than is generally supposed

DR G P POND, San Francisco, agreed with Dr Crockett regarding the importance of the fresh air treatment The sooner physicians realize that it is not so much the Adirondacks or Maine or southern California, as good food, fresh air and satisfaction with their surroundings that benefits patients, the sooner they will get to the successful treatment of such cases, not only tuberculosis of the ear, but tuberculosis of other parts as well

DR CULLEN F WELTY, San Francisco, stated that he had seen several double perforations and they have always been associated with tuberculosis of the lung He thinks that every one of these patients ought to be operated on Practically the only thing that can be done is operation, and the sooner this is done the better the chance for complete recovery He repeated Politzer's statement "If you find incipient tuberculosis in a patient who has acute otitis which lasts for more than six weeks he should be operated on at once"

DR F L JACK, Boston, said that he did not understand that Dr Crockett laid any great stress on the importance of removing infected glands in the neck, and asked what his experience has been, whether if not removed they have subsided or disappeared in favorable cases Dr Jack also asked if he explains why the gland in front of the tragus is affected? It is about one of the first symptoms of this disease, almost before there is evidence of middle ear trouble

DR E A CROCKETT, Boston, said that he thinks removal of the infected glands in the neck absolutely essential but that it is more important to attend to the ear portion of the operation first For instance, in the last case, many operations had been performed on the child's neck, without the ear being touched, and after each child nearly died At the time he removed the sequestra there were a half dozen glands on the side of the neck Two months after the operation they had disappeared Many glands will do that if the original focus is removed, and those that do not should be promptly operated on Dr Crockett believes operation should be pushed to the limit of the child's strength otherwise one can not deal with the disease So far as open air treatment goes it has been successful in the cases he has observed In the case of a baby that only weighed ten pounds with a daily temperature of 102, he found no difficulty in having it sleep out o on a covered porch last winter He thinks that is well protected from a direct draft and put in a fur sleeping rug there will be no difficulty even with an infant that is in poor condition *This child's nurse slept out also, to take care* of it, and she received almost as much benefit from the open air treatment as the child did

PLEURITIC EXUDATES IN CHILDREN *

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I do not find the literature on this subject very extensive While attending lectures in Paris I observed many interesting cases in the "Hôpitaux Des Enfants Trouves," which I had the privilege of visiting daily for a month in company with the physician in charge Since then it has been my fortune to encounter a number of cases in my own practice Last winter, especially, pleurisy seemed very prevalent, accompanying as well as following the different forms of acute pneumonia We seldom find pleurisy a primary disease In my experience effusions of the right side predominate over the left Pleuritic exudate, either serous or purulent, is common in infancy and childhood, more particularly the latter, especially before the fifth year of life As the chest wall at this age is more resilient than in the adult, large exudates are better borne, producing fewer pressure symptoms

ETIOLOGY

The etiology is at times obscure, the majority of cases being attributed to the different inflammatory processes of the lung In some, however, there is no other exciting cause than an exposure to cold and dampness, which, by reducing the constitutional power of resistance, establishes avenues of infection

Under ordinary conditions the pleural cavity represents an enormous lymph sac, containing only a small amount of fluid, which escapes from the blood vessels and is carried off by the lymphatics In pleural inflammation the lymphatics are not able to carry off the excess of fluid, and it accumulates This may be first serous in nature, later becoming purulent

Bacteriologic examinations of the fluid, whether serous or purulent, often show an absence of micro-organisms Again, as stated by Netter, we may recognize three groups of acute or subacute pleurisy, caused by the tubercle bacillus, the pneumococcus and the streptococcus The tubercle bacillus is at times difficult to find Pneumococcus pleurisy is often secondary to inflammatory processes of the lung It may, however, be primary The exudate is usually purulent, but the prognosis is very favorable Streptococcus pleurisy is the typical septic form, which may occur either from direct infection of the pleura through the lung in bronchopneumonia, or in cases of streptococcus pneumonia It may also follow infection of more distant parts This is the most serious and fatal of all forms Here, too, the fluid is purulent

SYMPTOMS

Pleurisy with effusion is often very acute in its onset The symptoms resemble pneumonia, and in many cases a pulmonary process is co-existent, the symptoms of the one being masked by the other A high temperature is present, increased respiration, rapid pulse and pain, which in young children is referred to the abdomen In infants convulsions are often among the initiatory symptoms Dyspnea is at times very marked, the dilated nostrils and the drawing inward of the infrasternal region show a decided disturbance of the respiratory function The babe will favor the affected side by lying on it The white blood count is rarely increased except during the febrile stages These early symptoms are followed in a few days by the lessening of pain and the temperature having a decided morning remission

PHYSICAL SIGNS

The physical signs of fluid in the pleural cavity in children differ somewhat from those in adults Inspection shows a lack of movement of the affected side on inspiration, which is apparent in even very young children If the fluid is large in amount there is in addition to the impaired motion a bulging of the affected side The individual intercostal spaces do not always bulge On the contrary, the chest may be full of fluid and a retraction of the spaces exists which increases on inspiration In left-sided exudates the displacement of the heart is more marked, the impulse being seen in the third and fourth right intercostal spaces, sometimes as far out as the right mammillary line The heart is not so much displaced in effusions of the right side, the impulse being seen in the fourth interspace between the left mammillary and mid-axillary lines The liver and spleen are at times displaced downward, resembling an enlargement of the organs This, however, is not so marked in the child as in the adult.

PALPATION

By palpation we find complete absence of vocal fremitus in older children, while in infants the cry fremitus is lacking, although it may persist with large exudates if there are conducting bands of adhesion between the lung and chest wall

PERCUSSION

The percussion note shows marked variations from slight dulness to absolute flatness, according to the amount of fluid present Great skill must be exercised in percussing the chest of a child, owing to its elasticity A layer of fluid may exist between the lung and the chest walls, in which case skillful percussion will reveal dulness, while more forcible percussion brings out the pulmonary note of the underlying lung When the exudate is small in amount, the dulness is first detected in the back, its upper limit being higher than in front When the patient assumes the upright position, it has the letter S curve, beginning at the vertebral column, extending upward from the spine diagonally across the back and reaching its highest point in the axillary region, then descending rather abruptly toward the front to a point a little below the sternum Changing the position of the child will reveal movable dullness when fluid is present Pulmonary resonance will be heard above the line of effusion, while below there will be dulness varying to flatness, depending on the thickness of the layer of fluid between the lung and the percussing finger The resistance to the percussing finger is peculiarly wooden in character On the unaffected side resonance is increased, often becoming tympanitic

AUSCULTATION

Auscultation may reveal an absence of breath sounds or distant tubular breathing Bronchophony is increased and is at times very pronounced Moist râles and friction sounds are often heard, which are probably transmitted from points above the level of the fluid

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DIAGNOSIS

The classic signs of fluid in the pleural cavity are flatness on percussion, absence of vocal fremitus and absence of respiratory sounds Dr Louis Faugéres Bishop of New York, in a paper on diagnosis and treatment of fluid in the pleural cavities, says that the fact that so much is dependent on the absence of sounds makes the diagnosis difficult, for it is well known that it is next to impossible to persuade some patients to breathe properly

PROGNOSIS

Prognosis in serous pleurisies is good at this age, unless we find some of the virulent micro-organisms present Serous exudates are of especial interest when they contain such pus organisms as the pneumococci The difference between purely serous pleurisy and pyothorax is simply a matter of degree, at times the upper layers of an exudate are serous and the lower purulent In cases of this kind we apprehend severe symptoms If the pleuritic exudate occurs on both sides the prognosis becomes grave When effusion is extensive, compressing the lungs and displacing important viscera as the heart, there is danger of asphyxia When the fluid is not readily absorbed and likely to become purulent, the prognosis is more unfavorable on account of the prolonged pressure on the lung, with its corresponding ill effects on the general condition of the child

TREATMENT

The treatment of serous exudate will vary according to the amount present If there is no displacement of important viscera and little disturbance in the respiratory function, as well as in the circulation, an expectant treatment is all that is required If, however, the exudate is large and absorption is delayed, the chest should be aspirated The physical signs should guide us where to aspirate, but usually the point of aspiration is in the fourth or fifth interspace in the mid-axillary or posterior axillary line It is well to make a bacteriologic examination of the fluid to determine which form of organism, if any, is present. If one of the more benign forms is found, no further treatment will be necessary, unless there be a re-accumulation, when a second aspiration must be resorted to If, however, we find streptococci there is danger of the fluid becoming purulent and requiring treatment.

EMPYEMA.

When a pleural exudate has become purulent it is spoken of as an empyema This condition is more common in the first three or four years of life than a serous effusion It is caused by the invasion of the pleura by pus-producing organisms Empyema does not present its characteristic signs at first, but develops in most cases from a serous effusion We find several intervening stages between the serous and the purulent exudates The pathologic and bacteriologic causes vary, depending on the micro organisms present In cases of streptococcus infections the inflammation may be purulent at the start. Primary empyema may occur through an injury to the pleura from without, the infection taking place through the wound In cases in which we find no evidence of disease in the neighboring organs the pleura has been secondarily involved by some virus in the blood or lymphatics

SYMPTOMS

We find the same pressure symptoms in empyema as in serous effusion, but in addition those produced by pus, as fever which may be high and often associated with chills The fever assumes the septic type, cachexia, anemia and prostration soon becoming very prominent Leucocytosis is very pronounced, being the most important symptom in the differential diagnosis from a purely serous exudation The latter condition shows a scarcity of leucocytes

DIAGNOSIS

The diagnosis of empyema depends on the signs of fluid in the pleural cavity, also on the number of leucocytes present, but a diagnosis can not be made definitely without the use of an aspirator In all cases the aspirator should be freely used One of the greatest sources of error is the practice of resting content with a single negative puncture The consequences of neglected empyemas are often serious

I mention a few lesions with which empyemas may be confounded Acute unresolved pneumonia The frequency of bronchial breathing, vocal resonance and normal tactile resonance over a pleural exudate which is frequently present makes a diagnosis difficult. Aspiration alone will clear the diagnosis, often several punctures being necessary 2 Serofibrinous exudates —In serofibrinous exudates a diagnosis distinguishing it from the purulent form is difficult Pronounced leucocytosis favors empyema, however, it will be safest to use the aspirator as guide Aspiration may at times be necessary to diagnose a case from chronic adhesive pleurisy 3 Atelectasis —An occlusion of the bronchi in children may be caused by a simple bronchitis The symptoms of this condition may closely resemble those of empyema, here, again, it will be necessary to resort to aspiration

PROGNOSIS

Recovery without surgical interference very seldom takes place, the patient succumbing to prolonged suppuration In infants under one year mortality is highest Pus when present should be removed at once, since the longer it remains the more it endangers the function of the lung whose expanding power is more or less impaired The patient also loses strength rapidly from the fever due to suppuration and absorption of toxic material

TREATMENT

The fundamental rule in treating empyema is to consider it an abscess, removing the pus as early and thoroughly as possible, and securing ample drainage as long as the secretions persist The fever subsides almost immediately and the condition of the patient improves at once The method of procedure varies Aspiration may at times give permanent relief, but often it fails There is some difference of opinion as to whether it is better simply to incise an intercostal space or, in addition, to remove a portion of one or more ribs I am in favor of the latter, as the indications are twofold first, to make an opening large enough to permit of the insertion of one or two fingers to break up any adhesions which may be present, and, second, to permit thorough drainage In favorable cases of empyema operated on early, the lungs expand in a normal way within a very few days

I might mention the puncture method with hydraulic drainage of Bulau Here a permanent outflow of pus is established, negative pressure being produced in the chest by suction on the fluid which thus favors expansion of the lung The advantages claimed for this method are that the operation may [illegible] and without anesthesia and through a very small opening The idea is good, but the results have been favorable in only a few cases, its effectiveness being uncertain When the expansive power of the lung is deficient it is impossible to remove all the pus, since it drains off in quantities corresponding to the space which can be filled with expanding lung tissue Then, too, the drainage tube may become clogged with coagula, thus interfering with the success of the operation and necessitating a resection of the rib

THORACOTOMY

The technic of thoracotomy with resection of one or more ribs, according to Joseph D Bryant, is as follows After taking thorough antiseptic precautions, employing local or general anesthesia as the condition of the patient requires, select the sixth or seventh rib and make an incision in the axillary line about two or three inches in length down on the middle of the rib in the long axis Through the periosteum bisect the primary incision at the center with a horizontal one the width of the rib, raising from the bone on both surfaces, with a periosteotome, the periosteum together with the surrounding tissues, being careful not to open into the pleural cavity Exsect an inch or an inch and a half of the bone, dividing it with a saw or rib forceps, arrest the hemorrhage and then make a suitable opening through the intervening structures into the pleural cavity, permitting the fluid to escape Division of the intercostal vessels should be avoided Irrigation is dangerous and ought to be used very cautiously Normal salt solution or Thiersch solution is best used for cleansing the wound One or two drainage tubes should be inserted, just reaching the pleural cavity, and should be fastened so that they can not escape within Antiseptic dressings should now be applied and changed as often as indicated by the amount of discharge

As the discharges decrease in amount the lungs expand and the abscess cavity diminishes, the tubes may gradually be removed, the patient completing recovery in from two to six weeks

CASE SUMMARIES

CASE 1—A child, about 2 years old, was taken ill suddenly last winter Vomiting, a high temperature, and evidently severe pain in the right side of the chest were the first symptoms The temperature ranged from 104 to 107 A diagnosis was made for lobar pneumonia At the end of a week the temperature dropped suddenly, but this was only for one or two days, when it again ascended, differing from the temperature at first in that it now had the morning remission ranging from 99 6 in the morning to 105 5 in the afternoon There being considerable dulness present, after waiting a few more days I decided to aspirate, removing but a small quantity of a serous fluid, sufficient, however, to assist resorption, for the child began to improve at once, making complete recovery without further surgical interference

CASE 2.—A child about 4 years old was taken with the usual symptoms of pneumonia, viz., fever, pain, cough and dyspnea After the usual time, although the temperature was lower and the pain less, dyspnea increased and convalescence was not established The temperature now assuming the septic type, on aspiration I found pus, and thoracotomy with resection of two ribs was performed by Dr Knapheide and myself, when more than one pint of purulent fluid was evacuated The usual antiseptic dressings were applied The patient made a splendid recovery in about four weeks

CASE 3—A boy about 5 years old a few years ago had empyema I wished to aspirate After sterilizing the field I cautioned the little fellow to remain quiet while inserting the needle He promised, but just as the needle had entered the intercostal space he moved suddenly, causing the needle to break The parents had objected seriously to an operation previous to this, but now two indications for operation confronted me, viz, to find the needle and to find the pus The parents consented to search for the needle, fortunately we found both, but the pus first I performed thoracotomy, resecting a portion of two ribs The boy made a good recovery

CASE 4—A baby less than a year old was taken suddenly last winter with a high temperature and severe pain in the right side of the chest, moaning with every inspiration Respirations were rapid and labored The little fellow insisted on lying on the affected side Inspection, percussion and auscultation revealed pneumonia. The temperature ran continuously high, ranging from 104 to 106, at the end of a week It dropped suddenly and was practically normal for about two days, when it again climbed. It then assumed the remittent type, low in the morning and highest about 4 p m, the temperature not being the same every day This continued for about a week, when I decided to aspirate Pus was found, and he was taken to Blessing Hospital, where thoracotomy with resection of one rib was performed The little fellow rallied from the operation and did well for three days, when the temperature ascended again, profuse diarrhea set in and he succumbed

DISCUSSION

DR JOHN LOVETT MORSE, Boston, disagreed with Dr Germann on several points In the first place a serous pleurisy is extremely rare in infancy There have been but two cases in the Infants' Hospital in the last ten years Serous pleurisy almost never has an acute onset in childhood, dry pleurisy does Fluid not infrequently causes only slight dulness, while at times, especially on the left side, there is no dulness, but tympany, even when the pleura is full of fluid Several points in the differential diagnosis between solid lung and fluid in the pleura were not brought out. The point of greatest importance is a sense of marked resistance on the affected side In pneumonia there is a certain amount of resistance, but never marked When there is fluid there is a marked sense of resistance Next in importance is the presence or absence of displacement of the heart and next the presence or absence of tympany in Traube's space, when the effusion is on the left side The presence or absence of fremitus is of some importance. The amount and character of the respiration and voice sounds are of comparatively little importance and as a rule can be disregarded He was glad that Dr Germann emphasized the importance of early operation Nothing makes so much difference in the prognosis of empyema as the time at which the operation is done, not only on account of the importance of avoiding marked compression of the lung, but also on account of dangers of sepsis from continued absorption It is perfectly possible to have a normal temperature in empyema It should be remembered, therefore, that empyema cannot be ruled out because the temperature is not elevated

DR T W KILMER New York City, recalled the teaching of Dr Holt in pleurisy with effusion, that in the presence of bronchial breathing over a very large area of lung there is fluid in nine cases out of ten, which he regards as one of the most valuable signs in the diagnosis of pleurisy with effusion Dr Kilmer has never been able to locate satisfactorily the apex beat except by the use of the stethoscope in the examination of infants In his hospital service in New York pleurisy with effusion has been treated by rest, exclusion of liquids, and giving gr 5 to 15 of sodium salicylate during the day They endeavor to have the children absorb their own fluids

DR THOMAS S SOUTHWORTH, New York City said that as many of these children are in a rather precarious condition when brought for treatment, and inasmuch as an incision through the skin and pleura can be made very rapidly and the tubes introduced quickly, without causing much pain, incision is often much the simplest and safest procedure Occasionally in cases in which the lung has long been bound down he does resection When the infection is a pure pneumococcus infection which yields more rapidly than a mixed infection the simple incision is sufficient in the larger number of cases in infants

DR. WILLIAM J BUTLER, Chicago, said that concerning the differential diagnosis of pneumonia and pleurisy, Dr Morse raised a point of much importance, that of resistance to percussion over areas of fluid compared with the far less resistance common to pneumonia Tympany over fluids is something he had not had opportunity to observe, at least, in cases in which effusion of any amount existed He could conceive that that is possible when the effusion is so slight as to be completely obscured by the resonance of the lung and hollow abdominal viscera He does not think difficulty in differential diagnosis between pleurisy and pneumonia so frequently arises as does that of the character of the fluid in pleurisy, and, as Dr Morse says, it is almost always purulent in very young infants It is always desirable to determine the character of the fluid which is present and this can only be done with certainty by the needle

Dr. John Lovett Morse, Boston, did not agree with Dr Kilmer's treatment of pleurisy by restriction of liquids and attempted absorption, because he thinks the main object of treatment must be to keep up the nutrition This cannot be done if the amount of fluid is restricted He thinks it wiser to feed the children entirely with regard to their nutrition, and to draw out the fluid if necessary He thoroughly approves of resection of the rib and not of incision, which does not seem to be a satisfactory operation Resection takes very little longer and causes but little, if any, more shock

Dr. T W Kilmer, New York City, said his reference was to children of from four to six years of age, in whom it is an advantage to have them absorb their own fluids He believes the nutrition element is a very important factor, but in the New York hospitals many patients of this age are treated with much more benefit by restricting the amount of fluid than by allowing a child to drink all the water desired

Dr. Melinda K Germann, Quincy, Ill, regretted that she could not coincide with the statement that there is no such thing as serous pleurisy in children She recalled a number of cases in which she had aspirated and withdrawn a serous fluid from the chest. In empyema she had never seen a case in which there was not temperature She had used salicylate of soda treatment with good results She did not advocate simple incision, unless the strength of the child does not permit resection Too much stress cannot be placed on the careful examination of young children Conclusions can be drawn only from objective symptoms because they have not the aid of speech to make known their sufferings

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Clinical Notes

REPORT OF CASES OF UTERINE FIBROIDS ASSOCIATED WITH GALLSTONES

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With the desire of impressing on the profession at large the importance of studying carefully all complications that may be present in a case of uterine fibroid I report the following cases in four of which the history of biliary colic was pronounced, but in the others not so distinct

For a number of years I have gradually become convinced, and am now fixed in my belief, which experience has confirmed, that, when opening the abdominal cavity for any operation, unless the patient is so weak that it is unsafe to make further examination, or to operate, the appendix should be thoroughly explored, and though there may have been no history of appendiceal trouble, still, if this structure is anatomically incorrect, or if normal in position, has given the history of any previous attacks, I make it a rule to remove it

As time passes, I am yet more strongly impressed with the belief that this rule is a good one, saving the patient possible further operative intervention

For about eight years I have convinced myself that it is also good surgery to examine the gall bladder, and, if gallstones be present, to remove them I feel disposed to insist on this, except, when, as before stated, the patients condition is so feeble that the risk is too great.

I am not aware that there is any pathologic relation between the gall bladder and pelvic troubles or associated with uterine myomata but the cases I have seen have been so pronounced that it has seemed proper to place them on record When we consider these cases they certainly present some strikingly illustrative points regarding the thoroughness with which we should do our abdominal work The performance of the operation of cholecystotomy is not a prolonged one, and is very easily accomplished When once the hand of the operator is in the peritoneal cavity the incision can be made very quickly, the gall bladder, if not too contracted, and far back, is easily brought up into the wound and reached in this manner

It took many years to convince the general practitioner that the surgeon could be of assistance in his abdominal cases and reports of cases of rare complications are yet in order to bring before him more clearly what and how much can be done by the general surgeon in the treatment of lesions, no longer medical, but assuredly surgical How many operations can be done on one patient at one time is yet a subject for close study by both the medical man and the consulting surgeon

Case 1—Mrs C, aged 60, entered Albany Hospital, May 2, 1902

Diagnosis—Papillomatous ovarian cyst, cholelithiasis

History—She gave a family history of a sister and niece having died of sarcoma of the ovaries and mesentery The patient had been ill for more than a year with gradual enlargement of the abdomen and more or less pain

Operation—On opening the abdomen there was an escape of a large amount of yellowish serous fluid There were cysts connected with each ovary The right broad ligament was clamped, the left broad ligament was sutured at once, then the appendages with the cystic tumors were removed and a supravaginal hysterectomy was done An enlarged gland in the mesentery closely attached to the rectum was removed and the walls of the rectum were sutured over There were extensive adhesions to the wall of the bladder and to the anterior wall of the uterus In removing the latter a large portion of the posterior wall of the bladder was included This opening in the bladder was closed with silk sutures Hemorrhage was controlled The gall bladder was found to contain many gallstones—over 100, and the usual cholecystotomy was done The appendix was also removed The wounds were closed with silkworm gut, a glass drainage tube was introduced into the bottom of pelvis and also into the gall bladder

The patient bore the anesthetic very well Drainage from peritoneal cavity subsided quickly and the gall bladder closed in about two weeks She left the hospital in good condition June 8, 1902

Pathologic Report from the Laboratory—Multilocular ovarian cyst with secondary papillomatous and carcinomatous degeneration

Subsequent History—The patient did well for a time, then the old symptoms returned with increased severity, and on May 25, 1903, I made an incision through the old scar and removed a sarcomatous cyst, somewhat flattened and larger than the fist, from the mesentery Similar growths in the pelvis were not disturbed A large amount of ascitic fluid was removed She was tapped by her family physician at her own home, Sept 13, 1903, and again October 17, when the doctor wrote me that he had withdrawn over ten quarts of fluid at one time, ill looking and tinged with blood After this last tapping careful examination revealed two large growths in right side of abdomen, about the size of the ones I removed at first operation After these tappings the patient felt weak for a day or two, then comfortable, with a good appetite, but each time the cyst began to fill again rapidly, and she ultimately died of exhaustion

Case 2—Mrs H G, aged 35, entered Albany Hospital Dec. 1, 1902

Diagnosis—Cholelithiasis, uterine myoma

Family History—Her father and mother both died of valvular disease of the heart, aged 64 and 58 years respectively A brother died of typhoid fever, aged 31, a sister died at confinement of acute Bright's disease, three sisters are living and well There was no history of so-called hereditary disease.

Personal History—This patient has had attacks of biliary colic since childhood, never severe until four years ago, when character changed entirely, growing more severe, and she passed stones Slight shooting pains were experienced occasionally through the abdomen, low down toward the umbilicus, and when on her feet she experienced a very weak feeling until thoroughly rested

Operation—Dec 3, 1902 On opening abdomen multiple fibroids were found low down in the pelvis and very adherent to the surrounding parts The ovaries and tubes were cystic, the right tube containing some pus The right ovary and tube were adherent to wall of peritoneum There was also a mass, the size of a hen's egg, in which were involved right ovary, fimbriated extremity of tube, appendix and head of cecum The left side was free from adhesions The left broad ligament was ligated in the usual manner, the right was clasped with clamp, and the tumor removed as quickly as possible The right ovary and tube were dissected out of the mass and removed. The cecum was closed over with Lembert sutures, all bleeding points were controlled, a piece of omentum was ligated, and the stump of the pedicle was sewed over The gall bladder was then explored through the median incision and several gallstones were found. The usual incision for cholecystotomy, 4 c m long, was made, using right hand inside of peritoneal cavity as a guide. The gall bladder was brought up into the wound, sutured to the peritoneum and surrounding structures by means of silkworm gut sutures and several catgut sutures The gall bladder was aspirated and 4 ounces of bile were drawn off The gall bladder was incised and 50 stones, the largest the size of a marble, were removed by means of a scoop A long glass drainage tube was inserted into the gall bladder and packed with iodoform gauze The patient took the anesthetic well and left the table in good condition

Postoperative History—The patient was somewhat slow in convalescing She was very cholemic and had a train of nerve symptoms marked by decided delusions, yet ultimately made a perfect recovery

Case 3—Mrs S W, aged 37, entered Albany Hospital January 8, 1903

Diagnosis—Pregnancy, gallstones, bicornate uterus

Family History—This was negative save that maternal grandmother died, aged 80, of cancer

Personal History—In the fall of 1892 she began to feel increased distress about the pelvis, and while regular in her menstruation yet noticed enlargement in the right side of abdomen It was thought she might be suffering from extrauterine pregnancy She had had several marked hemorrhages Menstruation was regular, and an exploration was advised, a positive diagnosis of gallstones also having been made

Operation—On Jan 12, 1903, I did a dilatation, curettement, supravaginal hysterectomy and cholecystotomy On vaginal examination the left side of the cervix was found badly lacerated and the usual repair was done A very distinct mass could be felt on the right side. A sound passed well up in the left cornu of uterus but could not be introduced readily on the right side. The patient was then placed in Trendelenburg position and usual median incision was made Careful examination now disclosed a double uterus, the right containing a fetus of possibly two months' pregnancy She had previously been curetted, had cervix repaired in another hospital and had had some pelvic peritonitis following Both sides of the uterus were carefully freed from adhesions The right ovary and tube were enlarged, with evidence of pyosalpinx present It was decided to do a supravaginal hysterectomy, after consultation with her husband, and also to remove the appendix. On examination of the gall bladder it was found to contain a number of gallstones, and the usual cholecystotomy was done. A number of stones were removed and the patient made a good recovery from both operations

Case 4—Mrs L R, aged 30, entered Albany Hospital May 5, 1904

Diagnosis—Dermoid cyst of ovary, associated with gall stones

Family History—Negative.

Personal History—There was pain in the right hypochondriac region, severe at times and associated with vomiting

Operation—An incision 4 in long was made in the median line between the umbilicus and the symphysis A left ovarian cyst was found and removed in the usual manner, appendectomy was also performed

The median incision revealed the gall bladder bound to the liver by numerous adhesions The field of operation was walled off by tampons On opening the gall bladder there was an escape of mucopurulent material The gall bladder was mopped out, four stones were removed, the bladder was stitched to the abdominal wound and a glass drainage tube was inserted in the gall bladder, with iodoform gauze packing This sinus continued and did not close under any line of treatment.

Second Operation—June 21, 1904, a second operation, anastomosis between gall bladder and duodenum, was done for closure of sinus The Murphy button was used. A few Lembert sutures were placed around the button to prevent leakage. There was slight soiling of the peritoneum A glass drainage tube was used

The patient made an excellent recovery, has since given birth to a healthy child and is in good condition

Case 5—Mrs E P, aged 38

History—Family and past history were negative. For the past two months the patient has suffered considerably with pain in the right side, associated with irregular menstruation The bowels were constipated, there were no attacks of colic. Micturition was frequent and painful

Operation—On Nov 21, 1903, I did a curettage and ligated hemorrhoids I also did a suprapubic hysterectomy for fibroid, appendectomy for chronic appendicitis and cholecystotomy for removal of a number of gallstones Recovery

Case 6—Mrs C G Family history negative.

Operation—On June 2, 1903, I did a left salpingo oöphorectomy and cholecystotomy, with removal of three large gall stones The patient recovered nicely

I have cited these few cases from some which have occurred in my practice to illustrate the difficulty we believe at one time existed, in operating on the gall bladder and like organs, while operating on the pelvis But while one needs to study carefully regarding the endurance of the patient, yet when the peritoneal cavity is opened, careful examination of these suspected organs should be made and operative intervention resorted to, if gall stones are present. This is in contradiction of many of our beliefs in the past.

28 Eagle Street.

A SIMPLE CONTRIVANCE FOR THE RELIEF OF HAY FEVER

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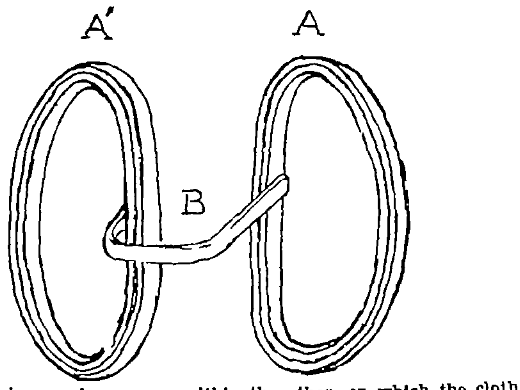
During the hay-fever season of 1905, I experimented very carefully on a number of hay-fever patients, trying to prove undeniably that the atmosphere at this time is laden with some irritating substance which could be removed from the air by filtration or some similar process The mode of investigation consisted in the use of an ordinary chemical laboratory water bottle This bottle was fitted with two glass tubes, to one of which was attached rubber tubing The water bottle was half filled with water, then the glass tubes were so arranged that when suction was applied through the rubber tubing the atmosphere so breathed came through the water in this bottle This apparatus worked on the principle of the Turkish pipe or water pipe By this means, it was hoped to remove from the air, when it passed through the water, any material which might be suspended in it.

With this apparatus it was necessary for the patient to inspire carefully through the nose and to expire through the mouth The success of this method was demonstrated in two people who were so sensitive to golden rod that they were thrown into paroxysms of sneezing and coughing when near it, when they inspired air through the water bottle, although the air was taken from the midst of a bunch of golden rod, in a few minutes they were comfortable and the irritation seemed to cease

This year I have made a small appliance, shown in the accompanying illustration, which fits in the nostril, the purpose being, so to speak, to filter the air as much as possible without interfering with respiration

This appliance consists of two rings connected by a small band Over these rings is stretched fine grass linen or chiffon (silk) It was found that to get the best results this material must have a fine mesh (one hundred or more threads to the inch) These two rings are placed one in and across each nostril, perhaps a half an inch from the external opening and so placed that all air respired must pass through the grass linen, chiffon, or whatever fabric may be used They do not interfere with respiration and can be worn very comfortably One man wore his continually for twenty-four hours, at business and during sleep These rings were used in a number of severe cases and in every one relief was apparent in from fifteen minutes to an hour



A two rings or hoops, one within the other on which the cloth or filter is stretched for right nostril. A, the same for left nostril B small connecting nose-piece or bridge to be used as a handle when inserting or removing rings

Sometimes the appliance was difficult to use if the patient began when his nose was so blocked that he could not breathe through it at all, if, in such a case, however, the patient will persist until he can establish nasal respiration to a sufficient degree the nasal irritation passes away very rapidly

Most of the patients on whom I have tried this appliance are people who under my direction have used Dunbar's pollantin and the active principle of suprarenal glands with little success I firmly believe that this sort of an appliance will give the hay-fever patient great relief These sufferers, especially those who have hay asthma, get considerable relief at night by putting a wet handkerchief over their faces and trying to breathe through it This fact suggested to me the possibilities of the above described contrivance

I have made the rings which hold the filtering fabric sometimes of cork and hard rubber, but usually of German silver It is not necessary to have the two rings connected by a bridge except that in this way it makes it easier for the patient to insert and to remove the rings When the appliance is made in this way and is in position there is a small band or wire passing across the septum where the septum joins the upper lip This is hardly noticeable

The rings are so made that fresh grass linen or chiffon can be applied whenever desired, this fabric being put on the rings in the same way that linen or cloth is put on the embroidery hoops used by women in their fancy work

This filtering fabric, when in use, soon becomes moistened by the secretions of the nose, but this adds much to the filtering power of the appliance, the moisture aiding the filter in holding back any pollen or substance suspended in the inspired air

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SUCCESSFUL DELIVERY OF TWINS IN PLACENTA PRÆVIA

E L. DEWEY, M.D
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History—Mrs M, aged 34, multipara, eight months pregnant, was well during this pregnancy until labor pains set in Aug 27, 1906 She arose and prepared breakfast as usual Labor pains set in with profuse bleeding about one hour after getting up

Examination—I saw her about thirty minutes after the onset of the hemorrhage Pallor and weakness were marked Pulse was 112 Abdominal palpation gave evidence of twin pregnancy One fetus was in the L O.A., the other in the L.O T, at the fundus, face downward The fetal heart sounds were plainly audible on auscultation Vaginal examination showed profuse hemorrhage, the os was soft and admitted three fingers The occiput was presenting The margin of the placenta overlapped the os, and was posterior

Diagnosis—Placenta prævia, complicating twin pregnancy

Treatment—I decided to operate at once and sent for assistants, in the meantime I tamponed the vagina with sterile gauze and gave a hypodermic injection of morphin sulphate, ¼ grain.

Operation—Under chloroform anesthesia and with strict aseptic precautions, I dilated manually, ruptured the membranes, performed version and rapidly extracted infant number one, the other infant was delivered in like manner I gave them to assistants to resuscitate, this was accomplished after twenty minutes

There was one placenta, which I removed manually Time consumed from the beginning of the anesthetic until the operation was completed, ten minutes

The patient made a good recovery

The infants were both males, weighing about five pounds each, and are strong and healthy

REMARKS

It seemed to me that this was a case in which active interference was imperatively required without delay The patient had lost an enormous amount of blood, and was in an anemic and exhausted condition Labor had set in and it would have been impossible, by expectant treatment, to prevent further hemorrhage

The infants were living and would certainly have perished if the hemorrhage had continued or if the labor had been prolonged

The vagina and pelvis were large and roomy The os was soft and easily dilated These points were the indications for operation in this case Cervical lacerations were slight and did not need repair

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON OFFICIAL REMEDIES" THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W A. PUCKNER, SECRETARY

(*Continued from page 1195*)

GUAIAMAR

GUAIACOLGLYCERYLESTER

Guaiamar, $C_6H_4 OCH_3 O(CH_2OH CHOH CH_2)$,1 2, $= C_{10}H_{14}O_4$, is the monoguaiacol ester of glycerin

It is prepared by the reaction of two molecules of sodium hydroxide one of guaiacol and two of monochlorhydrin at from 140 to 150° C (284° to 302 F) When the alkaline reaction has disappeared, the mass is diluted with water which leaves the greater part of the glycerin ester undissolved The portion dissolved in the water solution may be extracted from the latter by ether

It is a white, crystalline, non hygroscopic powder melting at 75° C (167° F) and having a bitter, aromatic taste It is soluble in 20 parts of water at the ordinary temperature but dissolves best in warm water, it is soluble in alcohol chloroform ether and glycerin Its solutions are neutral to test paper It is decomposed by soluble hydroxides and carbonates and by strong acids

Actions and Uses—The chief value of guaiamar arises from the liberation of guaiacol, partly in the stomach and partly in the intestinal canal, being split up by the gastric and intestinal contents with the assimilation of one molecule of water into guaiacol and glycerin By this evolution of guaiacol it is believed to exert a useful antiseptic action in the intestinal canal Moreover, it is asserted that it is absorbed by the skin as readily as by the alimentary canal and that it is without effect on the sound tissue, but becomes effective at the location of the diseased part It is said not to interfere with the normal process of digestion, but, on the contrary, to be followed by decided tonic action

It is recommended as a substitute for guaiacol in all cases where the latter is indicated In the form of ointment it has been recommended in acute articular rheumatism

Dosage—0 3 to 1 3 Gm (5 to 20 grains) in capsules or dissolved in warm water Locally, in the form of 25 per cent ointment with wool fat (lanolin), by itself, or combined with belladonna, zinc or mercurial ointment, etc

Manufactured by Mallinckroat Chemical Works St. Louis U S patent No 599 125

GUAJASANOL

DIETHYLGLYCOCOLL-GUAIACOL HYDROCHLORIDE

Guajasanol, $C_6H_4(OCH_3)(CH_2N(C_2H_5)_2 COO) HCl = C_{13}H_{19}NO_3HCl$, is the hydrochloride of diethylglycocollguaiacol

It is prepared by the action of chloracetylchloride on guaiacol and decomposition of the product with diethylamine.

It forms small colorless prismatic crystals melting at 183° to 184 C. (361 4° to 363 2 F) having a slight odor of guaiacol and a bitter saline taste It is soluble in its own weight of water and in 25 parts of alcohol but insoluble in ether

The solution in water should be clear colorless, and gives a white precipitate with silver nitrate. The oily base separates on the addition of an alkali hydroxide. When incinerated on platinum it leaves no residue.

It is incompatible with alkalies and their carbonates

Actions and Uses—It is antiseptic and anesthetic. It is readily absorbed and splits off guaiacol in the organism with marked facility Its antiseptic power is said to be about equivalent to that of boric acid

Guajasanol has been recommended for the treatment of tuberculosis, both internally and subcutaneously It is also recommended as a deodorant and is said to have given good service in putrid cystitis

Dosage—1 to 3 Gm (15 to 45 grains) in wafers, subcutaneously, 3 to 4 Gm (45 to 60 grains) in 20 per cent aqueous solution, locally it may be used in from 0 1 to 2 per cent solutions

Manufactured by Farbwerke, vorm Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co New York) U S patent No 624,722.

HEDONAL

METHYLPROPYLCARBINOL URETHANE PENTAN-2-OL-URETHANE

Hedonal, $CH_3 CH_2 CH_2 CH(CH_3)O CO NH_2 = C_6H_{13}O_2 N$, is a urethane differing from ethyl carbamate, U S P, in that the ethyl radicle has been replaced by the radicle of methylpropylcarbinol (pentan-2-ol) $CH_3 CH_2 CH_2 CHOH CH_3$

It is prepared by heating the secondary methylpropylcarbinol or pentan 2-ol, $CH_3.CH_2.CH_2 CHOH CH_3$, with urea nitrate under pressure (U S patent No 659 202), also by other methods, (German patents Nos. 120,863 120 864 120 865)

It is a white, crystalline powder, having a faint aromatic odor and taste, melting at 74° C (165 2° F), and boiling at 215 C. (419 F) It dissolves in 120 parts of water at 37 C (98 6° F) but is more soluble at higher temperatures and is readily soluble in alcohol, ether chloroform and other organic solvents. It is readily volatilized with the vapors of water or alcohol and when boiled with alkalies is split up into its constituents methyl propylcarbinol ammonia and carbon dioxide.

On boiling with dilute sodium hydroxide ammonia is evolved and recognized by the odor and the usual reagents if then an aqueous solution of iodine in potassium iodide is added, and the mixture allowed to cool the odor of iodoform derived from the alcohol is distinctly manifested.

It is incompatible with alkalies, their carbonates and bicarbonates.

Actions and Uses—Hedonal appears to have a greater hypnotic effect than ethyl carbamate It is said to be followed by no after-effects and is oxidized in the body to urea and carbon dioxide It is recommended in insomnia due to mental overwork or nervous excitement occurring in the course of neurasthenia or hysteria It is claimed to be particularly useful preliminary to anesthesia, a hypnotic dose being given and anesthesia effected with chloroform after the patient has been asleep for an hour

Dosage—1 to 2 Gm (15 to 30 grains), administered dry, followed by a swallow of water, or in wafers or capsules

Manufactured by Farbenfabriken vorm Friedr Bayer & Co., Elberfeld Germany (Continental Color & Chemical Co New York) U S patent No 659,202 German patents Nos. 11 496 120,863 120 864 120 865

HELMITOL

A name applied to Hexamethylenamine Methylenecitrate (which see)

Manufactured by Farbenfabriken vorm Friedr Bayer & Co Elberfeld Germany (Continental Color & Chemical Co., New York) U S patent U S trademark No 89 580

HEMICRANIN

A mixture of 5 parts of acetphenetidin (phenacetin), 1 part caffeine and 1 part citric or tartaric acid.

Dosage—0 5 to 1 0 Gm (8 to 15 grains)

Manufactured by Farbenfabriken vorm Friedr Bayer & Co., Elberfeld Germany (Continental Color & Chemical Co., New York) U S trademark No 27 151

HEMOGALLOL

Hemogallol is an organic iron compound produced from blood by reduction of its hemoglobin by means of pyrogallol

Fresh defibrinated blood suitably diluted with water is mixed with an equal volume of a saturated solution of pyrogallol which causes the precipitation of a voluminous precipitate which is separated, washed with water to remove pyrogallol, and finally with alcohol

It is a reddish brown almost tasteless powder, insoluble in water alcohol etc.

It does not show the spectroscopic bands of hemoglobin between D and F

Actions and Uses—It is hematinic

Hemogallol is recommended in anemia, chlorosis, chronic nephritis, diabetes and in convalescence

Dosage—0 25 to 0 5 Gm (4 to 8 grains), one-half hour before meals in powder with sugar or in tablets

Manufactured by E Merck, Darmstadt (Merck & Co New York) U S patent No 541 096

HEMOQUININE

COMPOUND ELIXIR OF THE SO-CALLED PEPTONATE OF IRON, MANGANESE AND QUININE WITH ARSENIC, SCHIEFFELIN

Each 30 Cc. (one fluidounce) is said to contain 2 16 Gm (34 grains) of so-called peptonate of iron (made by adding ammonio-citrate of iron to freshly preparted peptone of egg albumin) and 0 54 Gm (8½ grains) of so-called peptonate of manganese together with 0 3 Gm (5 grains) of quinine peptonate (equivalent to 0 15 Gm (2 3 grains) of quinine sulphate) and 0 08 Gm. (1/9 grain) of sodium arsenate in a menstruum containing 20 per cent of alcohol with glycerin and aromatics

Dosage—8 Cc (2 fluidrams) three times a day

Prepared by Schieffelin & Co New York U S trademark No 38 512.

HEROIN

DIACETYL-MORPHINE

Heroin, $C_{17}H_{17}(C_2H_3O_2)_2NO = C_{21}H_{23}O_5N$, is a synthetic alkaloid obtained by the acetylization of morphine

It is prepared by heating morphine with acetylchloride, washing the product with water and dilute solution of sodium carbonate and crystallizing it from alcohol

It is a white odorless powder having a bitter taste, an alkaline reaction and melting at 173 C (343 4° F) It is practically insoluble in water or ether, sparingly soluble in cold alcohol but readily soluble in hot alcohol It is soluble also in chloroform and in benzene It forms salts with acids which are soluble in water On prolonged warming with mineral acids it is saponified splitting off acetic acid and reforming morphine

A solution of 1 part of heroin in 100 000 parts of water becomes distinctly turbid on addition of solution of iodine. Its color reactions are similar to those of morphine, with the following exceptions It does not liberate iodine from iodic acid and does not at once produce a blue coloration with potassium ferricyanide and ferric chloride. No blue color is produced by the addition of ferric chloride to a neutral solution (1 in 100) made by the careful addition of dilute sulphuric acid. Its solutions reduce potassium permanganate.

Action, Uses and Dosage—See heroin hydrochloride

Manufactured by Farbenfabriken vorm Friedr Bayer & Co., Elberfeld Germany (Continental Color & Chemical Co New York) U S trademark

HEROIN HYDROCHLORIDE

DIACETYL-MORPHIN HYDROCHLORIDE.

Heroin hydrochloride, $C_{17}H_{17}(C_2H_3O_2)_2NO\,HCl$ is prepared by dissolving diacetyl morphine in dilute hydrochloric acid concentrating the neutral solution by evaporation and crystallizing

It is a white, crystalline, odorless powder having a bitter taste showing a neutral reaction with congo and melting at 230 to 231° C. (446 to 447 8° F)

It is soluble in 2 parts of water and soluble also in alcohol, but insoluble in ether

Its aqueous solutions are precipitated by alkaline hydroxides the precipitate being soluble in excess of the reagent, and by alkaline carbonates. In other respects the reactions are the same as those given under heroin (which see)

It is incompatible with alkalies and their carbonates tannic acid and other precipitants of alkaloids. It is decomposed by mineral acids, particularly when heated.

Actions and Uses—When given in small doses heroin hydrochloride has apparently no effect on any of the vital functions except respiration, which it renders slower, the volume of the individual respirations being increased, but usually not sufficiently to compensate the slowing, the result being a diminution in the total amount of air respired In large doses it may produce dizziness, nausea and occasionally constipation and, in poisonous amounts twitching of the extremities great exhaustion, and dimness of vision may be added The temperature becomes subnormal and the pulse rapid and thready The habit is readily formed and leads to the most deplorable results It is said not to produce costiveness (This is not true, according to some observers) It is readily absorbed from all mucous membranes It lessens irritability of the respiratory center, thus allaying cough, but does not depress the respiration as much as morphine

On withdrawing the drug from habitués there is said to be a tendency to respiratory failure which may be dangerous

Heroin and its hydrochloride are recommended chiefly for the treatment of diseases of the air passages attended with cough, difficult breathing and spasm, such as the different forms of bronchitis, pneumonia, consumption, asthma, whooping cough, laryngitis and certain forms of hay fever It has also been recommended as an analgesic, in the place of morphine in various painful affections

Toxic symptoms should be treated by the administration of caffeine hypodermically and of hot coffee by the stomach To avoid respiratory failure in the treatment of heroin addiction, it has been suggested to substitute morphine for the heroin and then treat the patient for morphine addiction

Dosage—0 0025 to 0 005 Gm (1/24 to 1/12 grain) to adults 3 to 4 times a day, the maximum dose being 0 01 Gm 1/6 grain To children it may be given in doses varying from 0 0002 to 0 001 Gm (1/300 to 1/60 grain), according to the age Hypodermically it may be administered in the form of a 2 per cent solution in the same doses It has been applied locally to the throat, to the uterus on tampons, and by suppository for painful pelvic affections generally, but there is no evidence that it produces any local anesthetic action

Manufactured by Farbenfabriken vorm Friedr Bayer & Co Elberfeld, Germany (Continental Color & Chemical Co New York) U S trademark.

HEROMAL

HEROIN AND HYPOPHOSPHITES IN MALT EXTRACT, SCHIEFFELIN

Each 8 Cc. (2 fluidrams) is said to contain Heroin 0 0013 Gm (1/48 grain) sodium hypophosphite 0 03 Gm (½ grain) in a menstruum of malt extract with 6 per cent. of alcohol

Dosage—8 Cc (2 fluidrams) every three or four hours

Prepared by Schieffelin & Co, New York U S trademark No 37 010

HEROTERPINE

ELIXIR OF HEROIN AND TERPIN HYDRATE, SCHIEFFELIN

Each 8 Cc. (2 fluidrams) is said to contain Terpin hydrate 0 13 Gm (2 grains) heroin 0 0026 Gm (1/24 grain), in a menstruum containing 32 per cent. of alcohol with glycerin and aromatic essential oils.

Dosage—4 to 12 Cc (1 to 3 fluidrams)

Prepared by Schieffelin & Co., New York. U S trademark No 36 181

HETOL

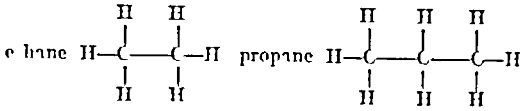
SODIUM CINNAMATE, MERCK

A name applied to sodium cinnamate (which see) prepared synthetically

Manufactured by Kalle & Co Biebrich a. Rh. (Merck & Co New York)

(*To be continued*)

Ane.—Puckner states that this ending denotes a saturated hydrocarbon, i e, a compound in which the carbon atoms are united by single bonds or valencies, thus



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[*For other information see second page following reading matter*]

SATURDAY, OCTOBER 20, 1906

EPONYMIC DISEASES AND SYMPTOMS IN MEDICINE

The revolt against the labeling of diseases or symptoms with the name of their discoverers, or those who have brought them prominently before the profession, is a perennial one Seldom a year passes that editorials on the subject do not appear, and current articles often contain comment on the subject Needless to say the comment is usually unfavorable to the use of proper names in this manner Minor,[1] for example, in a recent paper, says, in speaking of the so-called "Kœnig's sign," "It seems to me a regrettable tendency in the literature of our profession to attach to diagnostic methods or symptoms the names of individuals"

As in all questions, so in this one, analysis shows that both advantages and disadvantages may be discerned, according to the point of view The argument usually advanced against attaching proper names to diseases or symptoms is that they are not descriptive, and that the name of a disease or symptom should give some idea of its nature It is further argued, and with some plausibility, that, on account of this lack of descriptive quality, it is difficult for students to remember the names of eponymic diseases, and an already complicated subject is rendered still more complicated The subject is not devoid of its humorous aspects One almost shudders to think what might have happened if the Smith or the Jones family had been eminent in medical discovery If it is difficult for the student to remember the difference between Paget's disease and Addison's disease, how much more difficult to recollect how F X. Smith's disease differs from the affection of his colleague, P Arthur Smith It has, indeed, happened that occasionally one observer has had his name attached to two diseases There are, for example, two Paget's diseases, Paget's disease of the nipple and osteitis deformans

The use of proper names has of recent years, we think, degenerated in many instances into an abuse In some instances mistakes have been made in attaching the names of two, or even three, men to a discovery, generally the name of the true discoverer and the name (to use the terms of high finance) of the promoter The Klebs-Loeffler bacillus the Heinecke-Mikulicz operation, the Stokes-Adams syndrome, and the Charcot-Marie-Tooth form of muscle atrophy are examples of these hyphenated appellations It is, of course, sometimes a difficult matter to decide who deserves the most credit, the discoverer or the promoter The discoverer's description, while leaving no doubt of his discovery, may be vague and meager, couched in somewhat obscure terms, and buried in one of the comparatively mute and superlatively inglorious tenth-class medical journals with which the world is flooded The promoter may considerably extend our knowledge of the disease, and usually succeeds in dragging it into the limelight of professional publicity Another objectionable practice of late years has been the naming of modifications of operations This is certainly carrying the matter too far, especially when the modification is trivial and involves no change in principle The grotesque and the ridiculous here enter as a possibility One could imagine reading of Brown's modification of Jones' operation for Morton's disease of the foot Jones had probably suggested resecting one inch of the head of the fourth metatarsal bone, Brown modifying the operation by suggesting that one inch and an eighth should be removed

The advantages of attaching proper names to diseases and symptoms are mainly historical and educational The study of the history of medicine in this country has, of late years, been encouraged to some degree, but it is questionable whether it has been encouraged enough Question the German student of average intelligence, and you will usually find that he has a fair idea of who the living medical celebrities are and what they have done, and that he knows something about the Germans, at any rate, whose names are attached to diseases and symptoms Ask an intelligent American medical student who Bigelow was, or where Austin Flint came from, and the chances are that he will not know What pleasanter way of teaching the history of medicine than as an incidental to the study of the various branches? The anatomist could bring into his branch a good deal of history, for it is full of proper names, Galen, Fallopius, Glisson, Spigelius, Malpighi, Bowman, Bigelow, Gasser and many others could be named The same is true of physiology, of obstetrics, of surgery and of medicine

From the historical and sentimental standpoint, then, we believe that the labeling of diseases and symptoms is legitimate, and of distinct advantage, but, at the same time, we can not help seeing that the labeling may be, and often is, done with poor judgment The use of proper names should be restricted to actually new discoveries, new diseases, new symptoms and signs, or new principles of treatment, and the name should be a corollary of the real, scientific name The naming of unimportant modifications is bad, and multiple naming is worse That whole pages of editorials will stop disease naming of this kind we doubt excessively, for the *pruritus publicitati* is as strong in medical men as in other men, but much of the celebrity and credit which comes to the discoverers in medicine is of the postmortem variety

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[1] Amer Jour Med. Sciences 1906 vol lxxxii p 523

POSTMORTEM EXAMINATIONS OF BURNED BODIES

From time to time physicians are called on to make examinations of dead human bodies that have been burned more or less extensively The general questions that lead to such examinations may be stated summarily as follows Is death due to burns or did the burns occur after death from other causes? In the latter case is death due to natural or unnatural—criminal, suicidal or accidental—causes? In many cases burning may have advanced so far that the autopsy can give only negative results so far as many points may be concerned The first main question—is death due to burns? —may be answered positively by the demonstration of (1) changes in the skin that safely can be assumed to have been caused by the action of heat on a living body, (2) presence of soot- and coal-particles in the respiratory tract due to aspiration and of diffuse inflammatory and necrotic changes in the pharyngeal and laryngobronchial mucous membrane from the breathing of hot air and gases, (3) presence of carbon oxid in the blood and organs, a condition generally but not necessarily always of vital origin

The most essential early changes in the skin as the result of reaction to heat are redness and the formation of vesicles and bullæ Now redness only will be found rarely, because usually the effect of the heat will have been too extensively destructive and, in the second place, such redness fades away rapidly after death The presence of real blisters, filled with fluid, provided with a red marginal zone, and situated on parts of the integument that are free from edema and marked hypostasis, as a rule means vital changes The application of heat to the skin after death may cause the formation of small, flabby vesicles with serous contents, but without hyperemia Hence, under certain circumstances especially, great care must be used as to the interpretation of cutaneous alterations

Occasionally severe burning, with shrinking and contraction of the parts, may cause breaks in the skin, often provided with smooth margins and not unlike incised wounds, the bottom, however, is formed by the subcutaneous tissue which generally is ragged and burned, and such breaks are to be regarded as of postmortem or agonal origin At this time may be mentioned, too, the fissures and fractures of bones that may result from heat and that must be understood if the examiner is to avoid confusion with traumatic lesions Thus as the top of the head is destroyed extensive cracks and fractures may develop in the crumbling and calcined cranium, due, in part at least, to the formation of intracranial gases So far as known these fractures do not appear to extend very far into normal bone and do not seem to involve the base of the skull to any extent as a rule, but this is a point on which we seem to lack definite information Similar fractures are also encountered elsewhere, e g, as longitudinal, transverse or oblique cracks in the long bones Articular surfaces also may show numerous cracks[1]

In all examinations of burned bodies careful attention must be given to the internal organs, because these may contain important changes of various kinds The presence of soot- and coal-dust along the respiratory tract down into the bronchi is a good sign of the burning having taken place during life Loosening of the superficial epithelium of the mouth, throat and larynx has been interpreted as due to necrosis by inspiration of hot gases and secondary reactive desquamation, hence, a vital phenomenon The presence of CO in the blood and organs, as a rule, indicates that burning took place during life, and, in the absence of signs of violent death or internal disease, that death is due to carbon oxid poisoning In such cases the blood is liquid and light red, and the internal organs and muscles will also be light red[2] Recently certain observations have been published that indicate that CO may pass into the body through the intact skin[3] Strassmann and Schultz point out that in postmortem diffusion of coal gas into the body there is a decidedly unequal distribution of the gas, so that there may be a marked contrast between the color in superficial and deeper parts, to say nothing of chemical and spectroscopic differences At all events extensive postmortem diffusion takes place only after exposure to CO gas for a long time and in closed spaces Careful consideration of the external conditions consequently may throw much light on this question in a given case

Burned bodies may assume peculiar positions It has been shown that if the burns are extensive as the body lies on its back the arms become strongly abducted and supinated, they may be lifted upward and backward, there is strong flexion at the elbows and at times also in the wrists and fingers The lower extremities are flexed at the hips and knees and often abducted If the body lies on the side or stomach very peculiar positions may be assumed These often highly dramatic as well as abhorrent positions are not the result of vital phenomena, as not uncommonly is believed to be the case by laymen, but due to muscular contractions from coagulation by heat, the directions of the movements are explained by the fact that superficial muscles are affected first and possibly also to differences in the susceptibility to heat of the proteids of various muscles[4]

These brief considerations are intended to be in no sense complete, but simply to emphasize the complexity of the problems that may be presented by burned bodies and that it may require a high degree of special knowledge and expert training to investigate them intelligently and lay bare the true state of facts Unfortunately the American system of medicolegal practice is not calculated to lead to the development of experts in this line of work, the necessity for which in the interests of justice is evident to all We believe, further, that the custom of not having postmortem examinations in cases of accidental death in general, which include many cases of burning and death from burning, is an unfortunate one, because it deprives medical science of a rich opportunity for observations the results of which would be of the greatest importance in interpreting the findings in suspicious cases

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[1] This and other features of interest in connection with burned bodies are discussed by Harbitz, Norsk Magasin for Lægevidenskaben 1906 lxvii p 521

[2] Concerning spectroscopic and chemical demonstration of CO in the blood, etc. see appropriate works on chemistry and legal medicine

[3] See Wachholz and Lemberger Vierteljahrschr f gerichtl Med 1902, xxiii p 223 also Strassmann and Schultz Berl klin Wochenschr 1906 No 48

[4] Mayer Ueber den Einfluss hoher Hitze auf die Stellung von Leichen und über Wärmestarre 1898

EXPERIMENTAL ARTERIOSCLEROSIS

The efforts to solve experimentally some of the problems presented by arteriosclerosis met with but little success until Josué[1] demonstrated that intravenous injections of adrenal extract produce in rabbits sclerotic changes in the aorta Josué's results have been confirmed and extended by other investigators in Europe as well as in this country A brief summary of the American work in this line will serve to show how the matter stands at present

Pearce and Stanton,[2] injecting three minims every other day of a 1 to 1,000 solution of adrenalin chlorid, obtained sclerotic areas in the aorta and small aneurismal bulgings due to degenerative changes and calcification in the smooth muscular fibers of the media They emphasize that the earliest changes occur in the muscular fibers of the media which appear to be selectively affected as if by a toxic substance with special affinity Later there occurs mechanical breaking of the elastic fibers and aneurismal dilatation Klotz[3] obtained the same general results He also places the earliest change in the muscle cells and elastic tissue, there develop fatty changes and later calcification

While Josué and others placed the earliest changes in the intima, the authors mentioned are inclined to regard the intimal changes, which are not constant, as secondary, and thus to support the well-known theory of Thoma that in arteriosclerosis the primary lesion is in the media

The mechanism of the action of adrenalin in causing aortic sclerosis in rabbits can not be said to be clearly understood The early changes speak in favor of a toxic effect, and the distinctively focal character of the sclerosis suggests interference with the vasa vasorum which so far appear to have been normal structurally Loeb and Githens[4] obtained hardly any sclerosis with pyrocatechin a product of the adrenals which raises the vascular pressure The limitation of the lesions to the aorta (and the myocardium, Pearce) is as yet without adequate explanation

When we come to compare the experimental with human arteriosclerosis we find that there is considerable analogy, but also marked differences Klotz calls attention to the fact that the experimental disease anatomically resembles most a form of sclerosis of the arteries of the extremities (femorals, tibials, iliacs, radials, brachials), described especially by Moenkeberg,[5] which occurs mostly after 50 and is characterized particularly by the limitation of the degenerative and calcareous changes to the media

Undoubtedly further studies will furnish additional data that may help us to understand better human vascular sclerosis Other substances, e g, nicotin and digitalin, are being tried It is interesting to note, also, that Koranyi found that iodin, when given simultaneously with adrenalin, prevents largely the sclerosis that results when adrenalin is given alone The importance of Josué's original demonstration is evident, it has given the experimenter the means to study arterial changes under conditions that he can control to a very considerable extent

AN AMERICAN DOCTOR OF THE OLD SCHOOL.

It is usually thought that the picture so graphically and touchingly given by Ian MacLaren of the doctor of the old school in "By the Bonny Briar Bush" describes something that is entirely of the past and that can not be found in actual existence at the present day Any such opinion, however, does not take into account the depths of sympathy in certain natures which prompts them to think rather about others than themselves There is at least one striking example in our own day of sacrifices quite equal to those of Weelum MacClure, made for a people whose needs are quite as great and whose possibilities of returning anything like adequate rewards for services done them are even less than the Highland population which the Rev Mr Watson has described with such feeling The hero of the story is Dr Wilfred Grenfell, whose labors for the bodies and souls of the fisherfolk of the Labrador Coast have become very well known in recent years

His introduction to the American public came in Norman Duncan's "Dr Luke of the Labrador Coast," which, after running serially in one of our important magazines, had an extensive sale in book form This proved an excellent introduction to Dr Grenfell's own "The Harvest of the Sea," which dealt with his experiences in Labrador among the fisherfolk Norman Duncan's further books have thrown still more kindly light on the subject, and one excellent result has been that the North Coast, as it is called, has become much better known and has received a much larger number of visitors than ever during the last two or three summers Not a few of these have gone with the deliberate idea not only of seeing the scene of Dr Grenfell's work and of coming in contact with some of the kindly fisherfolk whom he and others have described so takingly, but also with the hope of meeting the genial doctor himself

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[1] Presse Médicale 1903 x, 798
[2] Jour Exp Med 1906 viii.
[3] Jour Exp. Med 1906 viii 504
[4] Am. Jour Med Sci., 1907 October
[5] Virchow s Archiv 1903 clxxi 141

It is understood that Dr Grenfell is to visit the United States next month partly in the interests of his patients, the fishermen, and partly in order to put himself once more in touch with such advances in medicine as may prove helpful to him in his work for these needy folk Physicians generally will doubtless rejoice at the possibility of being brought into personal contact with this interesting medical worker

THE EARLY DIAGNOSIS OF TYPHOID FEVER

In the fight against the spread of typhoid fever the early recognition of the disease is of great importance The Widal reaction, great though its value is, does not usually appear until the end of the first or the beginning of the second week Of late years, blood cultures have been used in hospitals a good deal, and it has been found that the typhoid bacilli can often be isolated from the blood very early in the disease, and long before the Widal reaction has appeared The usual method of blood culture, however, requires large quantities of blood and culture media, and can not well be applied outside of hospitals with properly equipped laboratories About five years ago Conradi[1] discovered that bile *in vitro* hinders the coagulation of the blood, and of late he has applied this knowledge to perfecting a method of cultivating typhoid bacilli from the blood This method has the advantage, possessed also by the Widal method, that the apparatus needed is simple, and that the preliminary steps can be taken by a man untrained in bacteriology Conradi's outfit consists of a small sterile bottle of bile to which a little peptone and glycerin has been added, a special blood lance, and a sterilized pipette The physician obtains the blood by lancing the ear, only one-half to two centimeters being necessary, inoculates it into the bile mixture, and returns the inoculated flask to the laboratory, where, after an incubation of sixteen hours, the bile is reinoculated on to lactose-litmus-agar Conradi claims that a positive diagnosis can be made in thirty hours in the great majority of cases The method, if on further investigation it proves to be feasible and successful, might well supplement or even supplant the Widal method, and should certainly be looked into by the workers in the now numerous board of health laboratories

ABUSE OF THE TUBERCULOUS

One distressing feature of the tuberculosis problem is that patients bring hardship on themselves and others by seeking climatic treatment without full knowledge of conditions that await them Thousands are leaving home without adequate means of support and are becoming burdens on communities which do not deserve the responsibility We have referred to this several times and we now repeat the warning because of a protest, published in *Charities*, from C H Gilchrist, superintendent of associated charities, Phoenix, Arizona Indigent consumptives are still pouring into Arizona and New Mexico to such an extent that Mr Gilchrist says the conditions force the necessity, either of excluding all tuberculous persons or of denying all assistance to the indigent who come Neither course, he says, is righteous or Christlike, but relief must be had from the present conditions Phoenix receives yearly tubercular tourists to the number of one-fourth of its population, and a large proportion of these are either indigent or speedily become so All possible avenues of employment are overcrowded *Charities* thinks that physicians are chiefly to blame for this state of affairs and suggests that they should not recommend removal to other climates without warning patients of the stern conditions that will face them if they are without means of support Physicians can not be held responsible for the action of persons who have simply received the general advice to go to the southwest, but economic conditions demand that physicians spread this warning whenever occasion arises

Medical News

ILLINOIS

Communicable Diseases.—Two cases of smallpox are reported from Hillary, Vermillion County ——An epidemic of diphtheria has reached such dimensions in Brimfield that schools have been ordered closed and public meetings have been prohibited ——Four cases of scarlet fever and 5 cases of diphtheria are reported from Moline

Warning to License Issuing Officers.—The State Board of Health has called the attention of mayors, chiefs of police and license issuing officers of municipalities of Illinois to the fact that in issuing licenses to itinerant vendors of medicine who do not hold licenses as such, issued by the State Board of Health, they are approving and giving their sanction to a direct violation of the state law

Personal—Dr Jonathan Dearborn, Mount Sterling, celebrated his eighty first birthday, October 6 ——Dr Augustus H Malm, Princeton, coroner of Bureau County, by virtue of a provision of the state law, will also take the office of sheriff of the county for two months The law provides that if the sheriff dies within a year of the next succeeding election, the coroner shall fill out the unexpired term ——Dr S S Beaupre has been appointed health officer of St Anne, vice Dr D Henry Pelletier

Coroners Want Legislation—The legislative committee of the Illinois Coroners' Association asks that the following matters which have been customs heretofore, to be put on the statute books

1 To compel witnesses to answer questions under a penalty for refusing
2 Autopsies to be held and paid for on the order of the coroner
3 A *per diem* fee for the coroner when inquests extend over one day
4 To compel physicians to report cases to coroner, and a penalty for failure to do so
5 Penalty for removing or disturbing a dead body without authority from the coroner
6 Undertakers not to inject embalming fluid into a body until the coroner allows, under penalty
7 Undertakers not to use any fluid containing arsenic or strychnin under any circumstances
8 Coroner to be allowed the same fee as the sheriff for serving subpenas.

Chicago

Personal—Dr Arthur R. Reynolds has returned to Chicago and resumed practice ——Dr Howard Crutcher, chief consulting surgeon of the Alton System, will, it is reported, move to Mexico, Mo

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[1] Münch med. Wochschr 1906 vol. liii p 1654

Phthisis Camp—On October 3 the first month of the tuberculosis camp at Dunning ended. Ten men and women are under treatment, and more are expected Another portable house, which will accommodate four more patients, is almost ready for occupancy

Appeals for Report of Births.—The health officer reports that at present the health department has a record of only about 60 per cent of the births in Chicago, and legislation is required which will make it necessary to present a certificate of birth before a child can enter the public schools

Claims Fulfilment of Gift.—The Presbyterian Hospital has filed a claim for $50,000 against the estate of the late Marshall Field, who, it is claimed, made a tentative bequest of that amount conditional on the donation of $400,000 to the institution by other persons. It is related that this money has been raised by other persons

Deaths of the Week.—During the week ended October 13 there were 528 deaths reported, 38 fewer than during the preceding week and 51 more than for the corresponding week of 1905 The respective annual death rates per 1,000 are 13 43 and 14 40 and 12 49 Consumption led the death causes with 74, followed by acute intestinal diseases with 62, pneumonia with 48, violence (including suicide) with 46, heart diseases with 39, Bright's disease with 36, cancer with 24, and nervous diseases with 23

IOWA.

Railway Surgeons Meet.—At the thirteenth annual meeting of the Iowa Association of Railway Surgeons, held in Des Moines, September 27 and 28, Dr Smith A. Spillman, Ottumwa, was elected president, and Dr Elbridge H King, Muscatine, vice president, Dr Albert B Deering, Boone, was reelected secretary, and Dr E C McMeel, Delmar, treasurer

Communicable Diseases—Diphtheria is reported to have broken out in the Odd Fellows' Home for Orhpans, Mason City ——Five cases of typhoid fever are reported near James —— Typhoid fever is reported to have been prevalent in Sioux City More than 30 cases have already been reported —— Scabies is said to be prevalent in the public schools of Keokuk. ——Fifteen cases of diphtheria, with one death, have been reported in Mason City ——From Sweetland Center eight cases of typhoid fever in one family have been reported

Circular of Warning.—Scott County Medical Society has taken up a commendable project and has had printed 2,000 copies of a circular prepared by Dr Charles H Preston, Davenport, dealing with the responsibility of physicians in the matter of instruction of the youth as to the danger incurred through sexual license. This circular has already been placed in the hand of the police matron and the physicians of Davenport, and is at the disposal of parents and others who may desire it In Dr Preston's opinion, the pamphlets should also be placed in the hands of factory owners, employers of labor, teachers of advanced schools, etc., where they would be, as a rule, well received, and do much good

Personal.—Dr Harry R. Irish, Forest City, has been appointed commissioner of insanity, vice Dr. William H. Jones, resigned.——Dr Thomas F Desmond, Webster City, sustained a dislocation of the shoulder and hip by being thrown from his carriage at Ackley, September 26 ——Dr Delmer L. Davis has been appointed professor of chemistry in the Sioux City College of Medicine ——Dr William P Crumbacker, superintendent of the State Insane Hospital, Independence, was assaulted by an employé of the institution and severely injured. ——Dr Robert E. Conniff, for many years president and a member of the State Board of Health, was thrown from his buggy in Sioux City, October 4, and seriously injured, three ribs being broken ——Dr and Mrs Henry C Hunter, Sheffield, have returned from Europe

KENTUCKY

The State Meeting—At the fifty sixth annual meeting of the Kentucky State Medical Association, held at Owensboro, Oct. 10 12, 1906, the following officers were elected for the ensuing year President, Dr D M Griffith, Owensboro vice-presidents, Drs John H Blackburn, Bowling Green, Milton Board, Hopkinsville and J T Reese, Cynthiana, secretary editor, Dr Arthur T McCormack, Bowling Green, treasurer, Dr W B McClure, Lexington, orator in medicine, Dr Clarence H. Baught, Richmond, orator in surgery, Dr J T Quinn, Henderson, delegates to the American Medical Association Dr J N McCormack, Bowling Green, and Dr W W Richmond, Clinton The next meeting will be held in Louisville A further report of the meeting will be published in The Journal next week.

MARYLAND

Illicit Disposal of Dead Bodies—The State Board of Health has been making investigations and finds that in various parts of the state dead bodies have been disposed of secretly and illegally for several years The law requires an official record and a burial permit The evil is said to be greatest in Baltimore County and in the suburbs of Baltimore, where the matter has assumed the form of a menace to public health. Since May detectives, working under the instruction of Dr John S Fulton, secretary of the board, have discovered 44 secret illegal burials in the county, 22 of which were near Highlandtown. Many of the bodies were buried only a few inches beneath the surface of the earth and became uncovered by the action of the rain. On October 12 Dr Fulton swore out warrants against 20 residents of the county, charging them with having violated the law

Baltimore.

Deaths of the Week.—The deaths for the week ended October 13 were unusually numerous, numbering 220, as compared with 176 for the corresponding week for 1905, the annual death rate for whites per 1,000 being 16 82 and for colored people 33 70 The notable increases in death causes were from pneumonia and consumption

Sir Almroth E Wright—So much interest was evinced in the lectures of Sir Almroth E Wright, mentioned in last week's issue, that two additional lectures were given, one being a demonstration of methods Prof William H. Welch, in summing up the lectures of Dr Wright, places his achievements on a par with those of Pasteur and Behring, who had worked along the same line, namely, that of immunization Dr Wright left Baltimore October 12 and returns to Europe this week

Keiber in Baltimore.—Dr Franz Keiber, professor of anatomy in the University of Freiburg, spent several days in Baltimore last week, looking up methods of research in the Baltimore laboratories He was the guest of Prof Franklin P Mall and was tendered several dinners and also a reception at the Johns Hopkins Club From Baltimore he goes to the Smithsonian Institution, in Washington, and thence to the Rockefeller institute, in New York City, sailing for Europe October 27

Must Accept Vaccination Certificates—The city solicitor has given an opinion that the school board must accept certificates of vaccination from physicians in private practice, showing that pupils in public schools have been successfully vaccinated He has also decided that health department officials have a right to enter the public schools at any time and examine the arms of the children, and, if they are not found to be properly vaccinated, to require that the same be done either by the health warden or by a private physician

Hebrew Hospital Festival.—At the thirty ninth annual Succoth festival of the Hebrew Hospital and Asylum, October 7, $2,800 was collected for the institute It was announced that the widow of the late president had increased her donation for the erection of a new hospital building from $75,000 to $80,000, that in addition she had donated $4,000 for the erection of a memorial room, to be dedicated to the care of professional nurses, and that in addition she proposes, when the new hospital is built, to endow a room in memory of her late husband, at a cost of $4,000

Personal.—Dr Henry M Hurd, professor of psychiatry in the Johns Hopkins Medical School, and secretary of the new Johns Hopkins Hospital, has been given a year's leave of absence and will spend it in travel in Europe, leaving about November 15 His place will be taken by Dr Rubert Norton, formerly house physician in the hospital.——Dr G H. Whipple has been appointed assistant pathologist at the Johns Hopkins Hospital, vice Dr C H Bunting, resigned to accept the position of professor of pathology at the University of Virginia ——Dr J Whitridge Williams has been made director of the dispensary with Dr Thomas McCrae as assistant —— Dr Pearce Kintzing has returned from abroad ——Dr Joseph C Hemmeter returned from abroad October 11, after an absence of five months

NEW YORK.

New York City

Bellevue's Demand Questioned—The request of the president of Bellevue and the Allied Hospitals for an increase of $226,559 over last year's appropriation has been refused, and the institution has been called on to account for the delay in erecting the new nurses' home

Aid to the Injured.—The board of education will give sixteen courses of five or six lectures each on "First Aid to the Injured" during October and November in its public lecture centers These lectures will be illustrated with stereopticon views and practical demonstrations, and at the close examinations will be held and certificates of efficiency will be awarded by the Society for Instruction in First Aid to the Injured

Contagious Diseases.—There were reported to the sanitary bureau for the week ending October 6, 346 cases of tuberculosis, with 154 deaths, 100 cases of diphtheria, with 22 deaths, 121 cases of typhoid fever, with 25 deaths, 49 cases of scarlet fever, with 3 deaths, 32 cases of whooping cough, with 15 deaths, 30 cases of measles, with 2 deaths, 12 cases of cerebrospinal meningitis, with 11 deaths, and 11 cases of varicella, making a total of 800 cases, with 232 deaths

Personal.—Dr Louis A. Stimson arrived from London after a twelve days' voyage on the yacht *Aphrodite*—Dr and Mrs William B MacCracken sailed on the *Minneapolis* for London October 13——Dr Charles Laight sailed for the Mediterranean on the *Princess Irene* October 13——Dr Julius L Amster, while driving along East One Hundred and Eighty ninth Street, was struck by a car, which completely demolished his carriage and threw him out, sustaining a broken shoulder, several fractured ribs and internal injuries

Park Milk Stations—Health officials have long admitted the beneficence of the Nathan Straus milk stations and recognized the crying need for an extension of the work At last an application has been made for an appropriation of $20 000 with which to establish permanent pasteurized milk stations in ten small parks of the poorer districts It is hoped that in time the city will furnish the 10,000 quarts of pasteurized milk per day which it is estimated will be necessary to supply the entire infantile demand of the tenements

City Noises—At a recent meeting of the Society of Medical Jurisprudence Dr Darlington read a paper on "Noises and Their Control," in which he expressed the opinion that little could be done to suppress many of the unnecessary noises unless the people themselves helped by arousing public sentiment, forming an anti noise league, demanding the help of taxpayers, etc. A resolution was presented to the board of trustees of the society requesting that the police commissioner be asked to enforce the ordinance regarding unnecessary and illegal noises

School Children Need Medical Attention.—The committee on the physical welfare of school children has made an appeal for more money in order that a large number of medical inspectors may be appointed for the purpose of making a more thorough physical examination of school children There are now 209 school inspectors, and it seems that 300 or 350 would be required for the proper examination of all school children, as there are some districts where the work is far beyond the capacity of the inspectors The board of health is getting out a double postal card, one to the parent telling what ails the child and requesting that the family physician be consulted, and the other to the family physician stating what the board of health has done in the way of treatment for the child In order to facilitate the better feeding of school children the Association for Improving the Condition of the Poor has placed in the field a visiting cook, who goes to the homes of the pupils and shows the mother in her own kitchen, with the utensils at her command, how to prepare food in the most nourishing and practical ways There is need for a number of cooks who would teach mothers in this way

PENNSYLVANIA.

Philadelphia.

Vital Statistics.—During September 2,933 births and 1,850 deaths were reported.

Civil-Service Examinations—Examinations will be held during November for the position of chief resident physician to the Philadelphia Hospital at a salary of $4 000, and assistant resident physician to the Municipal Hospital at a salary of $800

Bacteriologic Laboratory Report.—The report of the bacteriologic laboratory of the health bureau for September shows that 580 specimens were examined for diphtheria bacilli, 416 examinations were made of typhoid fever blood, 372 examinations were made of milk, and 114 of sputum The laboratory supplied 2,251 000 units of antitoxin, made 6 disinfection tests and 90 chemical analyses

Medical Inspection—During September 3,317 inspections were made by the medical inspectors, excluding schools, 365 fumigations were ordered, and 17 cases were observed that required special diagnosis 3,887 visits were made to the different schools throughout the city, and 487 children were excluded from the schools, 173 cultures were taken for examination, 94 injections of antitoxin were made, and 1,392 vaccinations performed

Diseases Show Decrease—Reports received by Health Commissioner Dixon show a steady decrease in diphtheria and scarlet fever cases since January of this year In the first month of the year 1,042 cases of diphtheria were reported, February, 885, March, 852, April, 703, May, 688, June, 546, July, 437, and a slight increase over July during the month of August The scarlet fever report is as follows January, 879, February, 875, March, 758, April, 687, May, 701, June, 517, July, 378, August, 350

Pure-Food Law Attacked—The Grocers' Association of Philadelphia has attacked the constitutionality of the dairy and pure food commission before the Supreme Court in Pittsburg They base their assertion on article 27 of the state constitution which prohibits state inspection of foods, and merchandise Attorney General Carson, who defended the commission, states that he does not think the grocers' association has any grounds for the attack, as the food commission was not violating the state constitution

Hospital Reports—During September the Mount Sinai Hospital admitted 48 patients, making, with the 22 patients under treatment at the beginning of the month, a total of 70 treated Of this number 40 were discharged cured, 5 improved, 8 left without permission and 3 died, leaving 26 patients under treatment at the end of the month. In the out patient department 3,505 visits were paid Of the total visits 945 were by new patients Of the new patients, 191 skin 8 diseases of the nerves, 47 gynecologic, 64 nose, throat and ear, 237 children, 42 were medical, 232 surgical, 211 eye cases and 150 dental. In the emergency ward there were 277 cases treated 23 being patrol cases——The report of the Stetson Hospital for September shows that a total of 1 455 patients were treated at the daily free clinics Of these 593 were surgical cases There were 254 cases of eye disease, 304 of ear, nose and throat trouble.

Health Report.—The number of deaths reported for the week ended October 13 aggregated 493, an increase of 91 over the number reported last week and an increase of 125 over the number reported in the corresponding week of last year This large increase is attributed to the sudden cold weather of the past few days The principal causes of death were Typhoid fever, 10, whooping cough, 9, diphtheria, 7, tuberculosis, 68, cancer, 36, diabetes, 5, apoplexy, 13, paralysis, 6, endocarditis, 7, heart disease, 45, acute respiratory diseases, 38, enteritis, 34, cirrhosis of liver, 5, Bright's disease, 39, congenital malformations, 10, premature births, 16, congenital debility, 12, accidents, 5, accidental traumatisms, 10, and marasmus, 10 There were 203 cases of contagious disease reported, with 19 deaths, as compared with 183 cases and 18 deaths during the previous week.

Medical Inspection in Schools.—Dr A C Abbott, chief of the bureau of health, states that he is well pleased with the work of two nurses in their attendance at the schools and favors increasing the force to eight The work of the assistant medical inspectors has been criticised on the grounds that as the inspectors have to report contagious diseases in addition to the school duties, disease might thus be transmitted Dr Abbott meets this assertion by the statement that he has yet to learn of a single case of disease being transmitted as a result of the visits of the medical inspectors The latter begin their day's work by visits to the schools and with the exception of a few kinds of cases, do not see the patients until they are convalescing, securing their early information from other members of the family The inspectors are required to disinfect themselves and adopt other precautions, so that the danger of contagion is reduced to a minimum.

TENNESSEE

Sanitarium Opened.—Drs J McChesney Hogshead and Darius N Barrett, Chattanooga, have opened a sanitarium at that place devoted especially to diseases of the eye ear, nose and throat.

Medical Society Meeting—The sixteenth annual session of the Eastern Tennessee Medical Society was held in Johnson October 4 and 5 The following officers were elected President Dr Walter S Nash, Knoxville, vice president, Dr H H Campbell and secretary and treasurer, Dr William M Copenhaver Bristol

Cruelty Charges Baseless—At a meeting of the board of trustees of the Western Hospital for the Insane Bolivar, called to investigate the charges of cruelty to patients which had been preferred against the assistant physician and three attendants, the trustees concluded that the charges had been grossly exaggerated and had been sustained in no single instance

Sentenced for Criminal Practice—Dr John L. D Walker, Chattanooga, charged with illegal criminal practice, who was convicted by the lower court and the decision affirmed by the Supreme Court, is reported to have been sentenced to imprisonment for 11 months and 29 days in the workhouse The prosecution was at the instance of the Hamilton County Medical Society

Tuberculosis—At a session of the State Board of Health in Nashville, October 2, the general question of the eradication and prevention of tuberculosis in state institutions was discussed The committee appointed to look into the question of tuberculosis in state prisons submitted a verbal report, and more time was extended to the committee and its powers enlarged, so that it might make the same investigations in all state institutions

Personal.—Dr George G Benson, Nashville, was seriously injured in a runaway accident, October 1 ——Dr A L Sharber has resigned as house physician of the Nashville City Hospital, and Dr R. W Grizzard, Jr, has been elected to succeed him Dr Sharber has accepted the chair of anatomy in the University of Tennessee ——Dr James J Teas, Waverly, has been elected secretary and treasurer of the Humphreys County Medical Society, vice Dr Claude C Sullivan, resigned.

Colleges Open.—The College of Physicians and Surgeons, Memphis opened October 1 Prof Rhea P Carey made the opening address and Dr Heber Jones acted as master of ceremonies ——Memphis Hospital Medical College opened for its twenty seventh annual session, October 1 Dr Frank Jones has been selected to fill the chair of clinical medicine and diseases of the chest, vice Dr Dudley D Saunders, resigned.—— The University of Tennessee, Nashville, opened October 1 Dr Guffin W Bull delivered the opening address on "Appreciation, Application and Addition" Dr E M Sanders has been elected assistant to the chair of gynecology and placed in charge of the anatomic library ——The University of Nashville opened October 1 Dr W G Ewing, dean of the university, delivered the opening address, and an address was also made by Dr Hugh Paggett, the recently elected professor of medicine —— The Medical Department of Grant University, Chattanooga, opened October 3 Among the new members of the faculty are Dr J McChesney Hogshead, instructor in anatomy, Dr Darius N Barrett, instructor in neurology, Drs Joseph W Johnson and J B Fields, assistants to the chair of practice of medicine, and Dr William A Duncan, assistant to the chair of surgery

TEXAS

Diphtheria.—An epidemic of diphtheria is reported to be prevalent in Deport, Lamar County ——Many cases of diphtheria are said to exist in the West Side addition to Taylor

Personal.—Drs Jesse M Pace and Charles M Rosser have been sworn in as members of the board of health of Dallas ——Dr Z T Bundy, Milford, has been appointed surgeon of the Confederate Home, Austin, vice Dr G Horace Gilbert, resigned to accept a position as assistant physician in the State Insane Asylum, Austin.

Tabor Endorsed—At a meeting of the Dallas County Medical Association October 1, resolutions were unanimously adopted endorsing the recommendation that the incoming governor continue in office the present state health officer, Dr George R. Tabor, whose service has proved entirely satisfactory and reflects unusual credit on the medical profession

Pasteur Institute Report.—Dr Benjamin M Worsham, Austin, superintendent of the State Pasteur Institute, reports that during the first fiscal year 81 patients were treated without the development of a single case of hydrophobia, and that during the second year 254 patients were treated, 226 of whom came from Texas, with 2 deaths The total fees collected were $2,410 and the disbursements were $1,039.36

Hospital Notes—An effort is being made to establish a hospital at Yoakum by Dr Charles H Brueur of Crete, Neb An organization was effected at the meeting September 26, trustees elected and the question of the purchase of a building considered ——The Physicians and Surgeons' Hospital of Greenville has been incorporated with a capital of $10 000 The Southern hotel property has been purchased and the building will be remodeled for hospital purposes

State Health Officer's Report.—In the biennial report of Dr George R. Tabor, state health officer, he directs attention to the fact that four years ago 75 per cent of the populated counties of Texas were infected with smallpox, but that the disease was rapidly decreasing Yellow fever has not appeared in Texas this year, and when it was prevalent in Louisiana last year it was kept out of Texas at a cost of less than $30,000 He bears testimony to the efficient services rendered by the Texas quarantine officers on the borders of Louisiana, Arkansas and Indian Territory The operating expenses of the department for two years amounted to $45,372, or less than for the previous biennium

Medical Colleges—The Medical Department of Fort Worth University opened for its thirteenth annual session, in its new building, October 2 Dr Frank Gray, dean of the department, presided ——The College of Physicians and Surgeons, Dallas, opened for its fourth annual session October 1 ——The Medical Department of the University of Texas, Galveston, opened for its sixteenth annual session October 1 Dr J F Y Payne, professor of obstetrics and gynecology, delivered the opening address ——The Southwestern University Medical College, Dallas, opened for its fourth annual session October 1, in its new building ——Baylor University College of Medicine, Dallas began its sixth annual session October 1 in its temporary quarters at the Good Samaritan Hospital

State Hospital Reports.—The superintendent of the Southwestern Insane Asylum, San Antonio, in his fifteenth annual report states that the average number of inmates during the year was 737 Patients were cared for at an average daily cost per capita of 42 cents During the year 70 patients were admitted, 45 patients discharged and 23 deaths occurred —— The State Lunatic Asylum, Austin, in its forty fourth and forty fifth annual report, showed that during the fiscal year ended Aug 31, 1906, the total population of the institution was 1,171, and that during the year 59 deaths occurred During the biennium ended August 31, 232 patients were discharged from the institution, 155 of whom had been on furlough for several months Tuberculosis caused 36 2 per cent of the total number of deaths Dr Worsham believes that the laws governing the admission of patients should be changed and modified, that court trials should be done away with and that laws similar to those governing epileptics would meet the requirements and be much less expensive He also recommends, in addition to the regular appropriation, an appropriation for $85,000 for a new building to accommodate 500 new patients, and also recommends that separate provision be made for the criminally insane

GENERAL

Erie Railway Surgeons Meet—The fifteenth annual convention of the Association of Erie Railway Surgeons was held in Chicago, October 10 and 11 New York was selected as the next place of meeting, and the following officers were elected President, Dr Daniel A Currie, Englewood, N J, vice president, Dr Frank D Bain, Kenton, Ohio, and secretary treasurer, Dr Jere A Allis, Upper Montclair, N J

Want Public Health Department.—At a meeting of the Conference on Home Economics, held at Lake Placid in September, according to *Science*, it was proposed that the Public Health and Marine Hospital Service be asked to issue a popular bulletin for the information of the public on health matters as the Department of Agriculture does in its domain The conference decided to communicate to President Roosevelt its approval of this plan and also of the establishment of a national department of health to coördinate and to extend the work done in this line by the government

Yellow Fever in Cuba—Dr von Ezdorf reports that 6 new cases of yellow fever, with 2 deaths, occurred during the week ending October 2 Two of these cases were from Guanabacoa, which is a town located across the bay of Havana One of the cases was discovered in the general wards of Covadonga Hospital and no precautions in the case had been taken In none of the cases could the source of infection be traced It is evident, Dr von Ezdorf states, that the disease is spreading, and that unknown foci of infection are scattered over the city of Havana, and in two suburbs, Guanabacoa and Vedado The sanitary forces in Guanabacoa have been increased and medical inspectors are daily inspecting the non immunes in and around the suspected districts The fumigating and oiling forces in Havana, which at the beginning of the month had been decreased, have also been increased, so that there are now 150 men in the fumigating brigades, 110 men compose the oiling forces and 30 men are for cleaning of ditches and making drains

Harvey Society Lectures—The second course of lectures under the direction of the Harvey Society of New York will be given at the Academy of Medicine building, 17 West Forty third Street, New York, Saturday evenings at 8 30 The lectures are open to the public and all interested are cordially invited to attend The program is as follows

October 20 Prof A E Wright London, 'Therapeutic Inoculation with Bacterial Vaccines '

November 8 Prof C A Herter New York 'The Common Bacterial Infections of the Digestive Tract and the Intoxications Arising from Them

November 17 Prof. W T Porter, Boston Vasomotor Reflexes

December 1 Prof. J G Adami Montreal, 'The Myelins and Potential Fluid Crystals of the Body

December 15 Dr S J Meltzer New York 'The Factors of Safety in Animal Structure and Animal Economy '

January 12 Prof F G Benedict Middletown, Conn Metabolism During Fasting '

January 26 Prof. D B Wilson, New York "Recent Studies of Heredity '

February 9 Prof G S Huntington New York "The Genetic Interpretation of Variations in the Genitourinary Tract.

February 23 Prof W T Councilman Boston The Relation of Certain Leucocytes to Infectious Diseases."

March 9 Prof Friedrich Müller Munich 'Neuroses of the Heart

CALIFORNIA FUND

Relief Committee of Physicians of San Francisco

Lane Hospital, San Francisco, Sept 28, 1906

The Relief Committee of Physicians of San Francisco respectfully submit the following, its first report In doing so it begs to extend sincere thanks not only in its behalf, but in the name of the profession of this city and surrounding country, to all who have contributed so nobly and generously in assisting our afflicted brethren

We desire to express our grateful appreciation to all who have aided us, namely

May 10	Brooklyn (N Y) Medical Society	$1 500 00
	St. Louis Med. Soc. per Dr Geo Homan Pres	600 00
May 11	Norfolk District (Mass.) Medical Society	407 00
May 12	Governor s Relief Committee of Hawaii per James F Morgan Esq	1 000 00
	Dr W J G Dawson, Eldridge Cal	50 00
	Dr G L Simmons Sacramento, Cal	50 00
	Dr S B Knox, Santa Barbara Cal	10 00
May 17	Dr Chas. L Allen Trenton N J	25 00
May 18	San Joaquin County (Cal) Medical Society	60 00
	Ventura County (Cal) Medical Society	37 50
May 19	Fresno County (Cal) Medical Society	200 00
	Essex District (Mass.) Medical Society	200 00
May 21	Dr R. W Sturgis Tanners Creek Va	5 00
May 23	John B Jackson Esq Pittsburg Pa	2 500 00
	Hon John Weaver Mayor Philadelphia Pa.	2 500 00
May 24	Oregon State Medical Society	500 00
	J A. Folger Esq San Francisco	1 000 00
May 26	Dr F C E. Mattison Pasadena Cal	50 00
May 28	Pasadena Med. Society per John E Janes Clerk	322 00
	Dr Chas T Kuhn San Francisco	5 00
	Monroe County (N Y) Medical Society	210 00
May 29	Riverside County (Cal) Medical Society	70 00
	M J Breitenbach Company, New York	500 00
	Dr A. Gude & Co Leipzig Saxony Germany	500 00
May 30	Dr H O Walker Detroit	200 00
	Dr J L. Robinson Reno Nev	60 00
May 31	S W Kentucky Medical Assoc. Paducah, Ky	100 00
	Miss Lilla C. Wheeler Portville N Y	300 00
	County Med. Soc Coleman Texas (Dr S N Aston Secretary)	5 00
June 1	Spokane Physicians Spokane, Wash	111 75
June 2	Santa Clara (Cal) County Medical Society	600 00
	Dr R. W Gardner Orange N J	100 00
	Smith Kline & French Co Philadelphia	100 00
	St. Louis Medical Society (second donation)	202 70
June 4	Mrs D G Bartnett Pacheco Cal	10 00
	Santa Barbara Co Med Soc., per Dr Wm. T F Flint	85 00
June 7	American Medical Association fund	4 495 82
	Chicago Medical Society	4 000 00
	Philadelphia Committee	1 999 50
	Placer County Medical Society, Grass Valley Cal per Dr J T Jones	80 00
June 14	Orange County Medical Society per Dr H S Gordon Secretary	58 50
	Portland Chamber of Commerce, Portland Ore	1 000 00
	Dr Wm J G Dawson refund on Pullman berth	2 50
	Dr Ella P Downing San Francisco	5 00
June 15	Dr C. L Muller, Nevada City Cal per Dr J T Jones	20 00
	W W Herron Esq Mobile Ala *	100 00
	Dr H E. Stroud Phoenix, Ariz.*	25 00
	McLean County Med. Society Bloomington Ill *	90 00
	New York Academy of Medicine and Medical Sciences, New York*	3 000 00
	United Protestant Churches of Williamsbridge N Y *	124 50
	Dr Lefferts A. McClelland Brooklyn*	5 00
	Minnesota State Nurses Association*	66 00
June 18	Monterey County Physicians, California	105 00
	Physicians of the Boroughs of Manhattan Bronx and Richmond N Y per Dr Chas H Richardson Treasurer	3 000 00
	Monroe County (N Y) Medical Society	10 00
June 19	Chamber of Commerce N Y *	5 000 00
June 21	Bartow County (Ga) Medical Society	9 50
June 22	Riverside County (Cal) Medical Society	30 00
	Nevada County (Cal) Medical Society	5 00
June 28	Dr M. A Craig Lower Lake Cal	5 00
	Unknown donor Sydney Canada	1 00
	Santa Clara County (Cal) Medical Society	25 00
June 29	Chautauqua County Medical Society	71 20
July 2	Central Willamette Medical Society per Dr W A Trimble Albany Ore	25 00
July 9	American Medical Association fund	2 000 00
July 10	Kings County (N Y) physicians (through Red Cross)	600 00
	New York Medical Society (Dr C H Richardson Treasurer)	1 000 00
July 23	Dr H O Blake care Darien Gold Mining Co Panama per Frank S Betz Hammond Ind	15 00
July 24	Santa Clara County Medical Society per Dr Wislocki	20 00
July 27	Yellowstone Valley Med Soc. Billings Mont	24 00
Aug 1	Dr F M Pottenger Los Angeles Cal	5 00
Aug 13	Dr L. Lebus, Ross Valley Cal	10 00
Aug 21	St Louis Medical Society	36 00
Sept 4	American Medical Association	3 000 00
Sept 12	Dr Henry Hertel	5 00
		$44 324 12

* Through the Finance Committee

STATEMENT

RECEIPTS

Donations		$44 324 12
Sale of instruments		122 55
Sale of books		201 48
Sale of desks and chairs		323 01
Other sales		16 50
Dr P M. Jones secretary State Medical Society payment of note	$581 35	
Dr P M. Jones payment on note	618 65	1 200 00
		$46 187 66

DISBURSEMENTS

Money distributed to physicians (321) on notes $2 856	$23 512 80
Purchase of instruments distributed to physicians	613 06
Purchase of books distributed to physicians	203 00
Dr P M Jones secretary State Medical Society on note for purchase of furniture	1 200 00
Freight and cartage	127 99
Advertising notices in newspapers	25 00
Printing Physicians directory application blanks etc	31 00
Sundry expenses Stationery etc	42 40
Salaries	795 00
Purchase of office desks and chairs for distribution	618 65
	$27 168 90

Receipts	$46 187 66
Disbursements	27 168 90
Balance on hand	$19 018 76

Dr W I Terry, President
Dr George W Merritt
Dr Lucy M F Wanzer
Dr Thos W Huntington
Dr M O Austin
Dr Philip King Brown
Dr F K. Ainsworth
Dr Emmet Rixford, Treas
Dr Julius Rosenstirn
Dr Herbert Moffitt
Dr. John Gallwey
Dr George H Evans
Dr Jas Ward
Dr Fred W Lux, Secretary

CANADA.

University News—Two students of Toronto University, since the opening of the 1906 1907 term, have been killed at football——For engaging in the annual "rustle" 35 medical students of Toronto University have been fined $5——The Undergraduates' Society of McGill University and the McGill Medical Society will amalgamate

Prevalent Diseases.—There are 231 or more cases of typhoid fever reported in Fort William, Port Arthur, The Sault, Copper Cliff, Rainy River and Parry Sound There were 25 deaths from the disease in September——To prevent the spread of disease among the school children of Montreal the local board of health has issued printed instructions to each school teacher, to aid them in coöperating with the medical inspectors——It is not the intention of the government of Canada to remove the 7 or so cases of leprosy at D'Arcy Island, B C

Cereals in Potted Meats.—The inland revenue department has published an analysis of potted meats and bologna sausage In 23 samples purchased in the open market in the province of Quebec and 23 in the maritime provinces, there were found corn starch and meal from cereals In the province of Ontario 37 samples had been so manipulated, the majority of these being of Chicago manufacture but some were from Toronto, Montreal and Vancouver In the opinion of the chief analyst the terms "potted" and "deviled" do not justify the addition of flour or cornmeal Of 32 samples of bologna and other sausage 11 contained dyes and 5 preservatives

Hospital News.—During September 282 patients were admitted into the wards of the Montreal General Hospital and 285 were discharged There were 21 deaths, 9 of these occur ring within three days of admission The outdoor consultations numbered 3,730——St Michael's Hospital, Toronto, will build large additions When completed the hospital will have 300 beds——The graduating exercises of the Training School of Grace Hospital, Toronto, took place last week. One hundred and ten nurses have been graduated from this institution up to the present time The hospital treats annually about 1,355 patients——St Michael's Hospital, Grace Hospital and the Western Hospital will shortly ask the city for a grant of $50,000 each——The Canadian Northern Railway is taking steps toward the establishment of a series of hospitals thoroughly equipped with every modern requirement at the divisional points of the system, presumably at Port Arthur, Rainy River and Winnipeg

FOREIGN

Ophthalmologic and Gynecologic Missions—The French minister of the interior has appointed Darier, the well known ophthalmologist of Paris, to go to Germany and study the arrangements for the hygiene of the eyes in the schools and instruction in ophthalmology He has also sent Platon of Marseilles to study the arrangements for teaching gynecology

The Semmelweis Memorial.—At Budapest, in Hungary, on September 30 a tablet was placed to mark the house where Semmelweis was born and a statue of him was unveiled in a public square The ceremonies included a series of addresses in the university hall in which he was extolled as one of the greatest pioneers in the whole history of medicine and one of the greatest martyrs to his convictions He died at last, it is said, of a broken heart, because his views met such constant opposition and ridicule

Black List of Medical Grafters.—The German medical press has commenced the compilation of a black list of those medical authors who write articles on the products of the manufacturing chemists and others for pay, and those who publish articles in various journals, alike or similar in form An article by an author on the black list will not be accepted by the representative medical journals, and such an article encountered elsewhere will not be abstracted in reviewing A similar list would be of value in other countries

MSS of Physicians from the Earliest History of Medicine—The Berlin Academy of Sciences has been examining the rich material of ancient medical MSS in its library, and has just published the first volume of a descriptive catalogue, devoted to works dealing with Hippocrates and Galen The work has been in charge of Professors H Diels and G Schöne After the complete catalogue is issued it is proposed to publish all the MSS in full Professor Heiberg of Copenhagen is to help in this task, especially with the Egyptian papyri

To Differentiate Harmless from Serious Albuminuria—Hingston Fox of London sent a communication to the recent Congress of Insurance Examiners stating that it is possible to distinguish between the harmless, transient form of albuminuria and the albuminuria due to an actual kidney affection The harmless kind is the result merely of a deficient coagulating power of the blood By administration of calcium lactate the blood is rendered less fluid, and the albumin vanishes from the urine in the harmless, hematogenic form of albuminuria, while it persists unaffected in the renal variety

Postgraduate Course on Medical Aspect of Accident Insurance—A free postgraduate course is being held this month at Berlin which deals with accident insurance as it affects the physician, the treatment of the results of accidents by the neurologist, by the surgeon, etc., the special features of official and private accident insurance, and insurance of the physician against accidents The attendants at the lectures, in groups of six, were given practical instruction in examining victims of accidents, in making out certificates of injury from accidents and in estimating the amount of damage to the earning capacity, etc

Pension for Tuberculous Government Employé—An employé of the French government postal and telegraph service was stationed at Bastia He was in robust health when he arrived there but he died a year or so ago from tuberculosis His widow applied for a pension on the ground that the office in which her husband had to work was insanitary and that he was compelled to work with a person known to be a consumptive, and that the two employés who had preceded him had likewise died of tuberculosis She demanded the pension accorded to widows of government employés dying from accidents resulting from the exercise of their professional duties Appeal to the highest authorities gained her the pension and has started a widespread movement for the sanification of the post and telegraph offices

Damage Suits Terminating in Favor of the Surgeons.—Professor Berger of Paris was recently sued by a couple whose child he had been operating on He had undertaken a series of plastic operations to restore the face of the child, but for certain medical reasons was obliged to abandon the attempt. The parents sued him for not having completed the task, but the court dismissed the case Dr Aubeau of the same place was also recently sued by a woman for $10,000 damages on account of an indispensable gynecologic operation which he had successfully performed She claimed that the operation had been too complete. He entered a counter suit, claiming 1 franc damages for her abusive pursuit The woman's case was dismissed and the physician was awarded the damages he asked. An editorial in the *Gaz Méd Belge* says that times are becoming brighter, ten years ago the courts would in all probability have decided differently

First International Conference on Cancer—The opening of the Institute for Cancer Research at Heidelberg, September 25, was celebrated by an international gathering of cancrologists—a notable assembly The institute is the first separate and endowed hospital and laboratory for the study and treatment of cancer yet erected in Germany, and von Czerny expects to devote his entire time to it The transactions of the conference are to be published in full in a supplementary number of the *Zeitschrift f Krebsforschung* The opening address was by von Leyden, who reviewed the history of cancer and its treatment, and declared that he had always been an advocate of the parasitic origin of cancer It is becoming generally accepted now, however, he added, that the cell itself is the parasite It assumes the properties of a parasite, and thus are harmonized the conflicting views in regard to the cellular and the parasitic origin of cancer Experiments in his laboratory have demonstrated that the chemical characteristics of the cancer cell differ materially from those of the normal cell The cancer cell generates an enzyme of toxic action which spreads around and causes proteolytic processes that reduce the resisting power of the environing cells before the encroachments of the cancer cells In referring to the conference none of our exchanges mention any communications as specially epoch making

The Traumatic Epidemic in Russia.—Under this heading the *Russische med Rundschau*, iv, No 8, 1906, quotes Schbankoff of St. Petersburg to the effect that conditions in Russia at present are more radical and more horrible than during the French Revolution, although just at present the disease process has assumed a more latent form The traumatic epidemic, an epidemic of murder and deeds of violence of all kinds and in their most bestial forms is pathologic and deserves the greatest interest of physicians The appearance of a new class of men is described, "the so called Hooligans," all from the cities, who serve indiscriminately the government or the revolution, wherever there is murdering and robbing going on All the old ideals and principles are crashing around one's ears, and life seems not worth the living, there is nothing left to live for, and people turn and rend each other or commit suicide The traumatic epidemic has spread to the peasants in some regions and fathers shoot down their families, feeble old women strangle others still more feeble, all are too excited to work, and no one is sure of the morrow The article concludes with the statement that the further spread of the epidemic seems to have been checked for the moment and that possibly the contagium may be destroyed by the vigorous antiseptic measures now being used or that Russia may develop in its own body an effectual antitoxin THE JOURNAL wishes to inquire whether conditions in Russia are not too serious to be treated in this facetious and flippant manner

The Ruined Doctor—Under this title the *British Medical Journal*, Sept 29, 1906, comments on letters from medical practitioners appearing in newspapers complaining of the insufficient remuneration which rewards the labors of the medical profession This state of affairs is attributed to various causes, some finding it in the competition of hospitals, others in that of the consultant or prescribing chemist One writer believes the falling off in medical incomes is due to the influence of hygienic measures in diminishing the prevalence of zymotic diseases The *British Medical Journal* is of the opinion that British physicians are at present passing through bad times, their incomes during the last three years having fallen off 25 per cent The chief causes of this are said to be, first, the gradual dying down of the epidemic of influenza of 1900 and the mild winters second, the depression of trade resulting partly from the frightful cost of the Boer war It is thought to be extremely probable that with the revival of trade and the freer circulation of money medical practice will regain its normal level of prosperity Furthermore, infectious diseases come and go in tidal waves, and there does not seem to be need for any immediate fear that the profession will suffer from permanent want of employment, especially in view of the fact that man is still far from having attained to mastery over the microbe, and is as unwilling or unable as ever to control those passions and appetites which engender in him a perennial crop of ailments, all of which contribute to the support and maintenance of the medical profession

The German Naturforscher Congress—The seventy eighth annual assembly of the Association of German Physicians and Scientists (*Naturforscher*), was held at Stuttgart, September 16 to 22 It is similar in scope to the associations for the advancement of science in other countries but it has always been distinguished by the large numbers of men who are actual leaders who are willing to leave their work and mingle with the younger set, to give the youngsters and the rank and file of the medical profession, in particular, the benefits of their ripe experience and to promote interest in science by illuminating subjects from all sides One of the medical subjects relating to accident insurance, for instance, was treated in turn by a psychiatrist, a neurologist, a gynecologist, and a surgeon The principal medical themes discussed in the joint meetings of the medical and surgical sections were "Operative Treatment of Brain and Spinal Cord Affections," "Position of Human Stomach," 'Achievements of Modern Research on Syphilis," and "Epidemic Cerebrospinal Meningitis," all presented by from 4 to 6 speakers, each from a different standpoint. In one of the two general sessions Garrè described the present status of transplantation in surgery, reporting much original and pioneer work, Spemann did the same for embryonal transplantation, and Korschelt for transplantation and regeneration in the animal kingdom in general A number of national societies, such as that for pediatrics, for history of medicine, for pathology, for legal medicine, for neurology and for urology hold their annual meetings in connection with the "Naturforscher" congress The king of Württemburg presided at the opening of the congress and threw open the doors of the opera house for a gala performance of the "Barber of Seville" Many of the members took advantage of the excursions to Tübingen to become better acquainted with this rather out-of the-way nest of able and vigorous scientific workers An editorial in the *Deutsche med Wochschr* remarks that the Naturforscher congress, or something of the kind, to keep the various specialties from drifting too far apart and too far from the fundamentals of all specialties, would have to be invented if it did not already exist It affords a gathering place for those men whose interest is not exhausted by the study of separate single questions, but who strive to keep in touch with science at large The congress next year will convene at Dresden, with Naunyn in the chair, during the last half of September

Second International Congress on School Hygiene—The Journal gave a brief description of the important First International Congress on School Hygiene, which proved very successful and far reaching in its effects The second international gathering of the kind is to be held in London Aug 5 to 10, 1907, and the official preliminary announcemnt has just been received through diplomatic channels The success of the congress is already ensured by the prominence and enthusiasm of those promoting it, and by the patronage of the king, Sir Lauder Brunton is president, and the 53 men on the permanent international committee are leaders in medicine, hygiene or pedagogy the world around There are four Americans on the list, President N M Butler of Columbia University, President G Stanley Hall of Clark University, Prof W T Porter, M.D, of Harvard, and Professor Bergstrom of Indiana University The recent death of Herman Cohn removes from the list one of the most zealous workers for hygiene in the schools The preliminary announcement says in regard to the first congress

> One of the happiest results of the Nuremberg Congress was that teachers medical men architects engineers, administrators officials and manufacturers appreciated how intimately their work and duties were correlated and also learned how greatly each was indebted to the other and the interests of all served by promoting the congress One of the aims of the congress was to coördinate the efforts of these various workers and to aid each separate investigator to enjoy results and experiences collected from wide areas and great populations under the most diversified conditions of race town country climate and social condition

The officers of the congress appeal for active coöperation in the preparations for the congress, emphasizing the vast importance of hygiene of body and mind in the schools as one of the most potent factors in the vigor, happiness and prosperity of a nation. They state

> The first step to be taken is the formation of a local committee for each particular town or district which committee should approach the authorities of the education department and the treasury the leaders of educational movements in town or country, the presidents or chairmen of educational committees, teachers of experience, philanthropists who are interested in educational movements and medical men who have experience in treating children engineers and architects, and any other citizens whose assistance would be desirable.
>
> This committee, when formed should report forthwith to the London bureau the name and address of the chairman and secretaries These local committees will be coördinated from London under national committees Their aim should be to do all in their power to promote the success of the congress by diffusing information by letters circulars or announcements in special and technical journals and by press notices They should also endeavor to obtain the coöperation and support of governments municipal or educational authorities and committees of institutes and societies and induce them to participate by delegating representatives to the congress or by sending representative exhibits of local interest or manufacture or scientific appliances or inventions to the school of hygiene exhibition which is to be arranged.

Contributions are invited from the representatives of governments or societies, or from individuals Suggestions are requested at once for the general discussions The subjects will be announced early, so that there will be time for collective investigation and observation The first program, with a list of the various national committees, the subjects of reference for general discussion, and details as to the arrangements of the congress, will be issued early in 1907 The subscription for membership is $5 for America All communications relating to the school hygiene exhibition, which will be arranged in conjunction with the Royal Sanitary Institute should be directed to the secretary of that institute, Margaret Street, London, W Other correspondence should be addressed to Dr James Kerr, general secretary, Parkes Museum, London, W, England

Fourth International Congress of Insurance Examiners—This congress convened at Berlin September 11 15 with a large attendance The questions that aroused most interest were tuberculosis, accidents and internal affections syphilis and alcohol, in their relations to life insurance The alcohol problem was finally dismissed with the adoption of a resolution that no discrimination should be made between drinkers and abstainers, but that persons employed in positions which expose them particularly to danger of intemperance, such as waiters, barkeepers, persons employed in hotels, and the like, must pay an extra premium The necessity was pointed out for paying special attention to the heart functioning and the blood pressure in passing on an obese applicant It was proposed to collect statistics in regard to the obese insured, noting their manner of life, their diet and consumption of alcohol The presiding officer, Florschütz of Gotha, presented statistics from the great Gotha life insurance company which showed the ultimate fate of 1,428 healthy persons insured in the society, in comparison with 1,428 persons who were healthy when first insured but who had had a parent or brother or sister die recently from tuberculosis The chest measure of the persons in the latter group was considerably less than that in the first group, with a still greater difference in regard to their waist measure and their weight. It was also noticed that those in the second group did not seem to grow stronger with increasing age, like those in the other group In the second group 36 per cent had a tuberculous family history, in the first group, 17 7 per cent The lessons learned from these figures have been heeded by the company to such good effect that the mortality from tuberculosis among their insured has dropped from 107 per cent in 1867 1880 to 86 per cent in 1881 1895 The mortality in the two groups of 1,428 each was 12 per cent of the total mortality in the first group, and 24 per cent among those in the second group Poels of Brussels stated that he had kept track of all the candidates rejected by a Belgian insurance company on account of suspicion of tuberculosis and had noticed that the mortality had been exceptionally high among them, confirming the judgment of the examiners Martius remarked that the examiner must individualize each case, whether he thinks that the old diagnostic measures are sufficient or supplements them by Freund's sign of premature rigidity of the superior aperture of the thorax Rothschild's sign of the early ossification of the sternal angle Stiller's floating rib or draws modern serology to his aid The family tendency to tuberculosis must be considered as higher the greater the number of relatives affected Also if the applicant is the only child or one of two if the other children have succumbed young to infectious diseases. In regard to the influencing of an internal affection by an accident Feilchenfeld of Berlin urged the examiner always to ask himself these seven questions 1 Did the accident cause the internal affection? 2 Did the internal affection cause the accident? 3 Has the accident roused up a latent internal affection? 4 Has the accident aggravated the internal affection? 5 Has the internal affection aggravated the effects of the accident? 6 Has the accident had any influence at all on the internal affection? 7 Is it possible to decide the actual relations between the accident and the internal affection? By weighing these points the examiner will be less liable to lay undue stress on either the accident or the internal affection In answering the questions it is well to separate all internal affections into four groups, the periodically recurring (like gallstones), the constitutional and affections of certain organs with an insidious course, especially the heart, kidneys and spinal cord The possibility of a traumatic origin is generally conceded in this group The fourth group comprises the constitutional diseases such as syphilis or tuberculosis, with a local lesion developing at the point of the injury The next group includes the chronic internal affections which—aggravated by the accident—first make themselves manifest after it, such as the functional neuroses, apoplectic phenomena or hemorrhage from the lungs Three points must also be borne in mind to determine the accident (suddenness, and physical as well as psychic stress), to determine whether the accident affected parts in the vicinity of the internal affection, and to determine the continuity of the symptoms (scientific basis for the assumption of a time connection between accident and internal affection) What he calls "indemnity hysteria" he likened to querulent mania, a disturbance of the mind resulting from the accident with a tendency to paranoia The most successful cure is to refuse all indemnity absolutely or to give the patient a lump sum In regard to syphilis Tiselius stated that he had found an excess of 75 6 to 28 5 per cent in the mortality of syphilitics insured in 9 Scandinavian and 17 English insurance companies On his recommendation all the Swedish companies arbitrarily added five years to the age of all syphilitic candidates Some speakers stated that the importance of syphilis had been underestimated hitherto, but others insisted that the kernel of the whole matter lay in whether a thorough course of treatment had been taken (preferably the Fournier Neisser methods) The congress adopted further a resolution urging effectual vaccination laws in all countries

The *Deutsche med Wochenschrift* for September 27 contains a full report of the congress The next one will meet at Vienna in 1909

LONDON LETTER.

(*From Our Regular Correspondent*)

London, Sept 15, 1906

Prosecution for Cruelty to a Child in Neglecting Medical Advice.

Cases in which parents have been indicted for manslaughter, because it has been shown at an inquest that a child has died who might have been saved by medical advice which they neglected to procure, are not uncommon They often occur among the "peculiar people," "Christian scientists" and other cranks, who believe that it is wrong to seek medical aid But no case like the following has ever occurred before in this country, in which a parent was prosecuted for failing to have an operation performed on a child A woman was summoned by the National Society for the Prevention of Cruelty to Children for neglecting her son, a boy aged 8 He was a cripple and had been operated on four times in Guy's Hospital when he came under the notice of the society in December, 1905 In August he was examined by a physician, and an officer of the society subsequently read to the mother a certificate given by the physician stating that the boy was suffering from a necrosis of the left thigh bone and that an operation was necessary to save limb and possibly the child's life The mother refused to have the operation performed and declared that she would continue to use a much advertised proprietary ointment which she said was making the child better In cross examination, the physician admitted that the child had been well cared for The magistrate said that before the society had taken these proceedings they should have called in a specialist, from whom a mother was entitled to know whether a fifth operation was necessary The magistrate dismissed the case, but refused to allow costs to the defendant because that would be assuming that she was altogether right

Diet Values

In the sections of physiology and chemistry of the recent meeting of the British Association for the Advancement of Science, held at York, an important joint discussion took place on the factors which determine minimal diet values Dr F Gowland Hopkins who introduced the subject said that the animal, and especially the human body, is capable of astonishing degrees of adjustment in respect to food Therefore, so far as immediate results are concerned, it is not easy to observe the effects of variations in diet values Again, it was difficult to estimate the quality of different human employments in respect of energy expended Voit has determined that for the average body under average conditions the standard for moderate work was 3,050 calories and 118 gm of proteid Professor Attwater increased these figures to 3,500 and 125, respectively, while Professor Chittenden has reduced them to 2,600 and 55 There is nothing in Chittenden's results to show that Voit's standard is too high, for the body can largely adjust itself to circumstances Experiments have shown that this adjustment is of a fundamental sort The work of the internal organs requires expenditure of more energy than has been supposed A small diminution of food from the ordinary quantity taken by a person results in no loss of power, but produces a loss of vivacity or what the Americans called "snap" This illustrated the fact that the total caloric value expended is not all used usefully, but a good deal superfluously Another important point is that the form of the proteid is of importance

Death from Eating Icecream

An inquest was held on the body of a child, a girl, aged 8 She had eaten some icecream wafers bought from an Italian in the street, and died on the following day The physician who attended her said that death was due to diarrhea from eating icecream, probably made under insanitary conditions The health officer examined the premises where the icecream was made and found in the utensil in which the icecream was made corners and angles containing fermenting and decomposing milk He said that there had been many cases of ptomaine poisoning in the district and that many children had died after eating icecream The vendor was fined $4 and costs

London, Sept 22, 1906

The London County Council and Street Refuse

The London County council has passed some very drastic by laws as regards street refuse, which are as follows No person shall (1) sweep or otherwise remove from any shop, house or vehicle into any street any waste paper, shavings or other refuse, or being a costermonger, news vendor or other street trader, throw down and leave in any street any waste paper, shavings or other refuse, (2) throw down and leave in any street for the purpose of advertising, any bill, placard or other substance, (3) throw down and leave in any street, any bill, placard or other paper which shall have been torn off from any bill posting station No person shall deposit in any street or public place, to the danger of any passenger, the rind of any orange, banana or other fruit, or the leaves or refuse of any vegetable No person shall throw, place or leave any bottle or any broken glass, nail or other sharp substance (not being road material) on or in any street or public place in such a position as to be likely to cause injury to passengers or animals or damage to property Any person who shall offend against any of these by laws shall be liable for each offense to a fine not exceeding $10

Prof Ronald Ross' Investigation of Malaria in Greece.

At a lncheon given to Professor Savas of the University of Athens, at the University Club, Liverpool, Prof Ronald Ross dealt with the subject of malaria in Greece He said that at the request of the Lake Copias Company the Liverpool school had investigated the prevalence of malaria in Greece He went out to that country in May 1906, and found a very serious state of affairs The population was practically confined to the valleys, the mountains being uninhabitable In these valleys he found a good deal of malaria The statistics of the country showed that in a population of two and one half millions there were 250 000 cases of malaria every year, of which 1,700 were fatal Last year the number of cases increased to 960,000 and the deaths to 5,916 Malaria is checking the development of rural life in Greece and is a very serious thing for the nation Professor Ross is of the opinion that it was malaria which checked the life of ancient Greece and that the disease was introduced, or at all events reinforced, at the time that natives of Asia were brought into the country He commended the movement initiated by Professor Savas for dealing with malaria The latter delivered a brief address in which he thanked the Liverpool School of Tropical Medicine for their efforts on behalf of Greece

Race Failure and Race Suicide.

At the annual congress of the Sanitary Inspectors' Association Sir James Crichton Brown delivered an eloquent address dealing with this and other subjects He pointed out that there is a close relation between undesirable social conditions and a high birth rate The wives in the districts of least prosperity and culture have the largest families and the morally and socially lower classes are reproducing with the greatest rapidity Thus the birth rate in towns inhabited by the affluent varies from 15 to 20 per 1,000, while in manufacturing towns it varies from 35 to 39 At present we are confronted with a reduced fertility in the more intellectual, more cultured, more prosperous, more thrifty and more cleanly classes of the community, which can not be accounted for by the variation in the mean age of the possibly productive wives This decline must be ascribed to physical degeneration or to the wilful and systematic prevention of child bearing, race failure or suicide

The Gospel of Recreation

Turning to another subject, the president remarked that over fatigue is one of the great dangers of the day, and that the ease by which it is induced is perhaps one of the signs of degeneracy The tough old blades, who did not know they had a liver or appendix and never went a mile from home except to earn a little money, are all but extinct, and it has become the duty of every physician from time to time to preach the gospel of recreation The struggle to acquire property, to win applause, to earn bread is fiercer than ever The pressure of labor has been transferred from the muscles to the nervous system, for physical energy is supplied by steam and electricity, and it is nerve energy that is needed to control machinery The indications, he said, are that the nerve tissue that supplies energy is more easily exhausted than it used to be An evil of the present day is forcing the pace of labor "Rushing" is finding its way to Great Britain According to Professor Oliver, he said, it is beginning to show its injurious effects at the northeastern ports The rivetters paid by the piece work so strenuously that at the end of a week of the usual number of working hours they are practically exhausted and are compelled to take an extended rest, and many spend Saturday afternoons in bed Professor James of Harvard, he said, affirmed that Americans show in their countenances intensity, rapidity, vivacity and a "bottled lightning expression," very different from the stolid cheeks, codfish eyes, and slow inanimate demeanor seen in the British Isles Notwithstanding the codfish eyes, there is in Great Britain an increase of nervousness, and the word neuasthenia, unknown to Webster, is daily on every physician's lips Innumerable hard workers suffer in the course of their work from nervous depression in its protean shapes—from "morning tire," as it is termed, from morbid irritability, from listlessness and inability to fix attention, from apathy and languor, from anomalous sensations and strange fancies, from headaches and prostration, from tremors and baseless apprehensions, from despondency and weariness of life. These occurring during arduous work, show that recreation is necesary The love of Nature and an appreciation of its healing power appeared to be increasing among the working and middle classes, while they appear to be dying out among the affluent The latter still gather in choice regions of natural beauty, but they approach them from the big hotel or bathing establishment or saline spring point of view and not from the Wordsworthian Absorbed in bridge and golf, "the harvest of the quiet eye" no longer delights them Rapid locomotion is the craze, which involves blindness to natural beauty, motoring being in relation to scenery what bolting is in relation to food With all its faults, the newspaper is one of the bulwarks of society of the present epoch It is the antidote to corroding egotism, it gives world wide horizon to the purblind and short sighted It thrills the torpid nerves like a Faradic current, it plays in turn on the whole keyboard of human temperament

London, Sept 29, 1906

Extraordinary Case of Morphin Poisoning

An inquest was held at Brighton on a man, aged 43, who had died from an overdose of morphin He had lived in China, where he acquired the morphin habit, and accustomed himself to very large doses He used to take as much as 60 grains in the day By means of a telegram and affixing the title "doctor" to his name he obtained two gross of pills, each containing two grains of morphin He took this enormous quantity within twenty four hours, and two hours before death he swallowed 100 of the pills After a period of excitement, paralysis of the respiratory center ensued and ended fatally The symptoms were of a tetanic character and the usual comatose state did not develop

Mischief Wrought by Antivaccinationists

The report of the medical department of the local government board for 1904 5 contains an account of a smallpox epidemic in the union of Dewsbury The board of guardians have set themselves up as systematic opponents of vaccination and refused to discharge their duties with regard to it At the same time the surrounding sanitary authorities have been remiss in providing hospital accommodation for dealing with the inevitable consequences For many years outbreaks of smallpox have occurred from time to time in Dewsbury In 1892 there were 272 cases and 45 deaths, in 1903, 240 cases and 17 deaths, in 1904, up to September 14, there had been 260 cases, and Dr Wheaton, who was sent down to report, found that the epidemic was fast passing beyond the control of the sanitary authorities The town smallpox hospital was overfull and its administration was completely disorganized, while no provision could be made for the numerous cases occurring in the surrounding districts At Dewsbury there was no efficient disinfection of the clothing of "contacts" and no provision for the reception of people from infected houses while these were being disinfected For lack of hospital accommodation smallpox patients were being kept in their own homes while their families were maintained in quarantine at the expense of the authorities Nurses had not been provided and convalescents were in attendance on the sick The conditions arising when several cases of smallpox occurred in the same house were such as would hardly be thought possible in a civilized country In one small bedroom Dr Wheaton found three adults suffering from smallpox, and a healthy woman occupied the same bed as a woman suffering from the disease Finding the guardians utterly impracticable, the local government board conferred the necessary powers on the Dewsbury town council, by whose prompt action as a vaccination authority the plague was shortly stayed But in the year ending March 25, 1905, 1,600 cases of smallpox occurred in the sanitary districts comprised within the unvaccinated Dewsbury union These cost the authorities $100,000

The Sanitary Condition of India

The annual report of the sanitary commissioners of the government of India for 1904 shows that the chief causes of death of the European army in India were as usual, typhoid fever and abscess of the liver, the former accounting for 34 and the latter for 12 per cent of the deaths The returns made with regard to malaria are much more minute than formerly The different forms of the disease have been classified and an account given of the occurrence of the anopheles at the respective stations, the measures directed against them, and the prevalence of malaria among the natives as judged by the examination of the blood of children under the age of 10 One result of this more complete investigation is to show that the benign form of malaria greatly preponderates over the malignant varieties No less than 89 per cent of cases belong to the former class It has also been found that a large proportion of the admissions were not new infections, but readmissions, pointing to the necessity of a liberal use of quinin both for treatment and prophylaxis With regard to typhoid fever it has been found that there are limitations to the rôle played by the drinking of water in its dissemination and that there are other modes of infection, notably infection by contact in which the method of transmission may be by the infective material being taken up on the fingers either from the soiled body of the patient or from the bed clothes or utensils used by him Infected milk and raw vegetables also play their part, while flies are evident agents of propagation Favorable conclusions of Major Leishman as to the efficacy of antityphoid inoculations are narrated

Return Cases of Scarlet Fever and Diphtheria

The Metropolitan Asylums Board has recently issued a report by Dr F M Turner on all the return cases of scarlet fever and diphtheria reported during the years 1902, 1903 and 1904 The total number of patients sent home from the hospitals after attacks of primary scarlet fever was 35,516, and the percentage of outbreaks following the discharges was 3 27 Dr Turner thinks that not more than one in ten of the alleged return cases can be regarded as coincidental, the remainder being due to the arrival of the patient from hospital He confirms the view that there is little, if any connection between post scarlatinal desquamation and infectivity As to nasal discharge, he finds that the cases in which this is present show an infectivity rate of 2 per cent., against 1.5 for the whole series

Pharmacology

Tyree's Antiseptic Powder

REPORT OF THE COUNCIL ON PHARMACY AND CHEMISTRY,

Tyree's antiseptic powder was assigned for examination to a subcommittee of the Council, which made the following report

To the Council on Pharmacy and Chemistry Your subcommittee, to whom was assigned Tyree's Pulv Antiseptic Comp, marketed by J S Tyree, Washington, D C, reports as follows

The label on the package states "This preparation is a scientific combination of borate of sodium, alumen, carbolic acid, glycerin and the crystallized principles of thyme, eucalyptus, gaultheria and mentha, in the form of a powder," etc.

The statement that the powder contains the crystalline principles of thyme, eucalyptus, gaultheria and mentha is vague and misleading, since the chief medical constituents of eucalyptus and gaultheria are liquids, but it tends to convey the impression that the powder contains the essential constituents of these drugs, namely, thymol, oil of eucalyptus or eucalyptol, oil of wintergreen, or methyl salicylate, and menthol.

The literature supplied to physicians *claims* its composition to be "Parts, sod bor, 50, alumen, 50, ac. carbol 5, glycerin, 5, the cryst principles of thyme, 5, eucalyptus, 5, gaultheria, 5, and mentha, 5"

The composition, therefore, might be expressed as follows

Sodium borate (borax)	50 parts, or	38 46 per cent.
Alum	50 parts or	38 46 per cent.
Phenol (carbolic acid)	5 parts, or	3 85 per cent.
Glycerin	5 parts, or	3 85 per cent.
Thymol	5 parts or	3 85 per cent.
Oil of eucalyptus or eucalyptol	5 parts or	3 85 per cent.
Oil of gaultheria (or methyl salicylate)	5 parts, or	3 85 per cent.
Menthol	5 parts, or	3 85 per cent.

Analysis of specimens purchased from different sources in the open market were made under our direction The reports of the chemists show that Tyree's antiseptic powder contains no borax, or mere traces only, and that it contains no alum, or mere traces only Instead, the analyses show that boric acid and zinc sulphate are the essential constituents The amounts of carbolic acid, thymol, menthol, etc., contained in the powder, if present, were far below the quantities indicated by the formula The presence of glycerin could not be demonstrated, and if present the amount must be very small

One chemist reports

The result of analysis shows that different samples differ slightly in composition but that the following indicates the average composition of the product

	Per cent.
Zinc sulphate, anhydrous	15 50
Boric acid	81 26
Volatile matter at 100 C. for four hours	0 45

The undetermined portion consists of salicylic acid, carbolic acid menthol and eucalyptol possibly other antiseptic agents may be present in very minute quantities.

From the above findings we conclude that Tyree's antiseptic powder is a mixture of boric acid and dried zinc sulphate and antiseptic bodies, such as menthol salicylic acid and carbolic acid eucalyptol etc. From this it can be readily seen that the label which is supposed to set forth the composition of Tyree's antiseptic powder is not in accord with the facts. The powder does not contain either borate of sodium or alum and the presence of glycerin could not be established The antiseptic agents exclusive of the boric acid, are present only in small amounts

The report of another analyst concludes as follows

It evidently contains less than the amount stated of the principles of thyme eucalyptus wintergreen and mint It also contains a very small amount indeed of carbolic acid much less than that stated We have been unable to identify certainly the presence of glycerin and it is doubtful if it be present.

From the result of the analysis we feel confident that the preparation is to all intents and purposes a mixture of boric acid and sulphate of zinc.

The carbolic acid thyme eucalyptus, wintergreen etc., if present are present only in sufficient amount to give the compound a satisfactory odor

In view of the fact that J S Tyree has given wide publicity to a formula which the preceding report has shown to be a deliberate misrepresentation of facts it is recommended that the article be refused recognition by the Council on Pharmacy and Chemistry and that this report be published in THE JOURNAL of the American Medical Association

The recommendation of the subcommittee was adopted by the Council in accordance with which the report is published

W A. PUCKNER, Secretary

The following correspondence is reproduced as it bears on the above

WASHINGTON, D C, Oct. 4 1906.

DR G H SIMMONS Chicago

Dear Doctor —Dr L. T Kebler chemist to the drug department of the Agricultural Bureau at Washington D C. requested me over the telephone this morning to repeat in part to you a conversation which passed between the doctor and myself a few weeks ago I know of no reason why I should comply with this request except as a courtesy to the doctor, for certainly I am under neither moral or financial obligations to you or THE JOURNAL of the American Medical Association.

As I remember the conversation I stated to the doctor that it *was and had been my intention* on or about the first of February to state my reasons to the medical profession for changing the formula of Tyree's antiseptic powder from an alum and borax base to a boracic and zinc base. This was done a short time ago at the suggestion of several prominent gentlemen who were connected with hospital clinics on venereal, nose and throat and other similar conditions that the powder might cover a broader and more useful field and again we found that the concentrated form of alum used in the manufacture of Tyree's antiseptic powder was unsuitable for all cases I further stated to the doctor that I had in contemplation the omission from the label of the various conditions to which this preparation was applicable, for the reason that one purchasing it for a gargle and spray would not care to see the other objectional diseases mentioned

The proportional formula of this preparation has never been kept a secret from the respectable members of the medical profession but it has been refused from time to time to be divulged literally to unscrupulous members of the profession as well as to business representatives of medical and drug publications The primary difference in connection with the formula to Dr Kebler was that I stated on my label that the preparation represented in one hundred parts, one hundred and thirty parts but after explaining to the doctor that after dehydrating the borax and alum and the loss in trituration and boxing that in reality we obtained less than one hundred parts The doctor further raised a point concerning the mention of glycerin on the label. This was explained that the glycerin was added to the carbolic acid instead of water that it might be held in a more permanent and satisfactory solution

I believe these were the major points that the doctor dwelt upon, which, after my explanation covering his enquiries seemed to be entirely satisfactory Truly yours, J S TYREE.

CHICAGO Oct. 9 1906

MR. J S TYREE Washington D C.

Dear Sir —Your letter of the 4th instant has been received. In this you state that Dr Kebler of the Drug Laboratory requested you over the telephone to repeat a conversation which passed between you and him some weeks ago You then say I know of no reason why I should comply with this request except as a courtesy to the doctor for certainly I am under neither moral or financial obligations to you or THE JOURNAL of the American Medical Association.

Under these circumstances I do not understand why you have written to me. However, while you are under neither moral nor financial obligations to me or to THE JOURNAL I do believe that you are under obligations to physicians to tell them the truth regarding a preparation you are asking them to prescribe.

According to your letter you have radically changed the ingredients of your powder and it seems to me that it would have been only fair and just to let physicians who are using this powder know of the change you had made. In the circular which you send with your letter the old formula still appears

Very truly yours, G H SIMMONS

The foregoing letter shows that Mr Tyree assumes the right to sell to physicians a preparation with a descriptive formula which he acknowledges is false, and that he presumes to use his own pleasure as to the time when he will inform them of its true composition.

Mr Tyree does not state when he changed the formula We do not know whether it was a year ago, five years ago or ten years ago, but we do know that the package which was used in making the first analysis was purchased as early as last February, and the first chemist's report was submitted to the Council March 5, 1906 On April 4 Mr Tyree was notified by the Council that the composition of "Tyree's Antiseptic Powder" did not correspond with the formula published by him

Whether or not Mr Tyree is justified in offering our profession a preparation as composed chiefly of borax and alum when in reality it is chiefly composed of boric acid and zinc sulphate, we leave physicians to judge

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Individual Diet.—While the classification of foods according to their chemical composition is of great value, the clinician knows full well that it requires an art to apply these facts in practice, in other words, articles of diet must be individualized just as drugs are.—*Medical Times*

Miscellany

Beriberi and Uncinaria—At the séance of the Acad. des Sciences, Paris, June 5, 1906 (*Progrès Méd* 3d Series Vol. xxii, June 16), M F Noc reported some facts concerning beriberi, observed in the native hospital at Choquin, near Saigon, French Cochin China In 77 cases of beriberi in Chinese and Annamites, he found in 74 examinations great number of the eggs of *Uncinaria americana* (Stiles) in the dejections, and he also found them in 17 out of 82 Annamites, themselves unaffected but living among those who were On the other hand, he failed to discover it in the dejections of 31 Europeans suffering with various bowel disorders, diarrhea, dysentery, etc He remarked that some of the symptoms described by Stiles as occurring in American uncinariasis such as edema of the face and limbs, dropsy, nervous troubles, are also present in beriberi In the autopsies of those succumbing to the disease he always found the lesions of gastroduodenitis, and whenever a hemorrhagic puncture was observed in the neighborhood of the pylorus, a careful search showed the uncinaria. The thymol treatment, moreover, by expelling the parasite, ameliorated the symptoms of beriberi with surprising rapidity From all these facts he has been led to think that this hookworm plays a notable part in the etiology of beriberi.

Lumbar Puncture in Diagnosis—L. Merzbacher, *Rivista di Patologia nervosa e mentale*, xi, May, 1906, finds from his study of the subject that the diagnostic points of value in lumbar puncture in organic diseases of the nervous centers are practically as follows In every case of paresis there is a marked lymphocytosis, and in the majority of cases a significant increase of albumin In tabes there is usually a marked lymphocytosis without any concomitant increase of albumin Syphilitic infection of the organism causes in most cases (80 per cent, according to his observation) a notable increase of lymphocytes, but not of albumin Inflammatory meningitis is accompanied by lymphocytosis, but not so the chronic hyperplastic meningitis Psychoses lacking syphilitic antecedents are not accompanied by lymphocytosis, and in the present state of our knowledge, lymphocytosis can be considered as the most constant and early symptom of paresis and tabes In the case of paresis the increase of albumin is also significant.

The Spirochaeta Pallida and Paresis—G Catola (*Riv di Patologia Nervosa e Mentale* XI, fasc. 5, May, 1906), has examined the tissues of five paretics for Schaudinn's spirochaeta, using the method of Levaditi and that of Cajal with fixation in ammoniacal alcohol He examined all the thoracic and abdominal viscera, the muscles, the lymphatic glands, the brain cortex and the cerebrospinal meninges, especially those parts showing opacity or thickening, and making hundreds of sections, but all with negative result The blood and cerebrospinal fluid were not examined during life His results, taken with those of Marinesco and Minea, reported to the Neurological Society of Paris, April 6, in which they had only negative results from the examination in tabes and paresis, lead him to conclude that progressive paresis is not due directly to the organism and is not, therefore, to be considered as a syndrome recognizing also the value of inoculation experiments

Gastric Tumors in Furnituremakers.—If a cabinetmaker gets the habit of drinking the polishing fluid, as sometimes happens, the shellac is liable to accumulate in his stomach Two concrements, each as large as a fist, were recently removed from the stomach of a cabinetmaker at Bonn, and Bier remarked on the case (*Med Klinik*) that an exceptionally movable tumor in the stomach of any one practicing this trade should always suggest the possibility of an accumulation of shellac.

Improved Technic of Radioscopic Examination of the Esophagus—Instead of having the patient ingest a suspension of bismuth in milk or water, Holzknecht, of Vienna (*Wien klin Wochsh*), mixes the bismuth with some sticky, tenacious porridge, which is hard to swallow and sticks along the sides of the esophagus The shadow cast by the bismuth is much more instructive than when it is taken in a more fluid suspension

Book Notices

Tahiti, the Island Paradise. By Nicholas Senn M.D Ph.D., LL.D, C M Professor of Surgery in the University of Chicago etc. Cloth Fifty Illustrations. Price $1 50 Chicago W B Conkey Company 1906

Dr Senn in recent years has become a traveler and a writer on travels He has journeyed practically over the whole world, seldom going over the beaten paths, but selecting for his excursions the unknown or little known parts of the earth In traveling he has seen things, kept his eyes open, and has written interestingly of what he has seen His description of his travels, as our readers know—for several series of his articles have appeared in The Journal—are not only interesting but also instructive. Usually his writings have been from the viewpoint of the physician and for the edification of physicians, but occasionally he writes from the standpoint of a layman for laymen The book before us is written for the public, although the medical aspect of the subject is not neglected

"Tahiti, the Island Paradise," is not a book of travels, but a description of what the author calls the gem of the southern Pacific, and a history of its people It is one of the Society Islands an archipelago in the southern Pacific Ocean, about 3,600 miles south by southwest from San Francisco It is not pretentious as to size, since it is only about 35 miles in length by, on an average, 12 miles in width But what it lacks in size it makes up in a thousand and one attractive features Not the least of these is that no one is compelled to work, it is the only place in the world, according to Dr Senn, where the inhabitants are not obliged to labor for their daily bread Certainly Nature has been very generous in providing for the wants of the Tahitans The climate is delightful all the year round, and the island has a never fading verdure and a vigorous vegetation The bread fruit tree furnishes the principal part of the food for the indolent among the inhabitants Manioc is another of Nature's gifts that may take the place of bread, and the cocoanut furnishes a good substitute for meat

Until visited by Europeans Tahiti must have been a Garden of Eden, but so called civilization has played havoc with its people In 1767, when Captain Cook first visited the island, the population is supposed to have numbered some 200,000, whereas the last census shows only about 11,000, the result, in great part at least, of the diseases introduced by Europeans

Several chapters are devoted to the history of the people, but this history is full of romance, but at the same time of pathos and tragedy The book is well worth reading, not only for the information it contains regarding a beautiful island seldom heard of and of a people who are living in a little world by themselves, but because the author has given us a book that from cover to cover is readable and interesting In some of his descriptions Dr Senn is often poetic, and always enthusiastic when speaking of the beauty and natural attractions of Tahiti He indulges a little too freely in quotations, classical and otherwise, so much so, we fear, as to occasionally tend to detract from one's interest in reading The book is well illustrated

Text Book of Medical Jurisprudence and Toxicology By J J Reese M D Late Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania Seventh edition Revised by H Leffman A M M D Professor of Chemistry and Toxicology in the Woman's Medical College of Pennsylvania Cloth Pp 650. Price $3 00 net. Philadelphia P Blakiston's Son & Co., 1906

The seventh edition of this valuable text book brings its subject matter well up to date, some of the more recent reports of cases in which modern exact methods of investigation were employed being given in considerable detail. Among the new matters introduced may be mentioned the application of x rays to the study of the skeleton, a met[illegible] that [illegible] direct bearing on the question of identificat[illegible] for blood is fully described Among [illegible] toxicology are chronic poisoning tanilid and carbon monoxid, acute poisoning by boric acid, resorcinol, wormseed and formaldehyd The tests for poisons are given with clearness, without unnecessary detail. The subject of ptomains is given due consideration, with the result that the whole matter must be regarded as being, to a considerable extent, *sub judice* While it is impossible in so small a book to give the detail that will be required by the expert medical jurist or toxicologist, this volume affords to the student and practitioner a reliable guide to a comprehensive view of this important subject

Marriages

Thomas L Ryan, M.D, to Miss Marie Barrett, at Detroit

M. Abi Massoud, M.D, to Miss Theo Gunn, at Stillmore, Ga, September 30

Edward L Whitney, M.D, to Miss Anna Hart Taylor, both of Baltimore, October 3

M. D Campbell, M D, Plumville, Pa, to Miss Mae Nichols of Scottdale, Pa, October 3

Frank B Easton, M.D, to Miss Lillian Louise Libby, both of Laconia, N H, October 3

Samuel Hume Watson, M.D, to Miss Jane Shreeves of Blairstown, Iowa, October 10

Louis Hamman, M.D, to Miss Mary Brereton Sharretts, both of Baltimore, October 10

Charles K Hudson, M.D, Gladewater, Texas, to Miss Edna Harris of Cincinnati, October 3

Harry B Gudgell, M.D, Hazleton, Ind, to Miss Emma Horrall of Princeton, Ind., October 4

Patrick F Kelleher, M D, Cambridge, Mass, to Miss Margaret L Linehan of Boston, recently

George T Fluke, M.D., Altoona, Pa, to Miss Eleanor V Regan of Philadelphia September 26

Paul Thomas Swett, M D, Hartford, Conn, to Miss Anna Cowan Poole of Baltimore, October 3

Walter A Carr, M D, Junction City, Kan, to Miss Effie Elizabeth King of Topeka, Kan, October 3

Alexander J McCannel, M.D, Minot, N D, to Miss Carrie M Graham of Forest River, N D, recently

Clayton Elmer Bartlett, M.D, Hot Springs, Wash, to Miss Barbara Haecker of Milwaukee, October 3

Francis A. Seymour, M.D, Los Angeles, Cal, to Mrs Pauline Garner Curran of Santa Barbara, Cal, recently

Benjamin Jerome Sands, M.D, Port Chester, N Y, to Miss Josephine Clark Wilson of Greenwich, Conn, October 10

Henry Stuart Patterson, M.D, New York City, to Miss Charlotte Wise Hopkins of Washington, D C, October 6

William Patton McDowell, M.D, Eufaula, Ala, to Miss Nealie Linsey Silvester, at South Norfolk, Va, October 10

Philip Edward Johnson, M.D, New York City, to Mrs Laura Hoadley Scarborough of New Brighton, S I., October 2

Roland C Harris, M.D, Rochester, N Y, to Clara E. Moore, M.D, of Syracuse, N Y, at Averill Park, N Y, October 2

Deaths

George Atherton Spalding, M.D College of Physicians and Surgeons in the City of New York, 1875, whose grandfather, a student at Guy's Hospital, London, was the first to bring to this country vaccine against smallpox and who came from a long line of distinguished ancestors, many of whom were in the medical profession, an alumnus of Yale University, and after his graduation in medicine for two years assistant to Dr John C Dalton, professor of physiology in his alma mater, an interne in St. Luke's Hospital in New York in 1875 and 1876, and later a general practitioner well known and highly esteemed, from 1879 to 1894 attending physician at the House of Refuge on Randall's Island, and from 1896 until the time of his death attending physician to St Luke's Hospital, a member of the New York Academy of Medicine Medical Society of the County of New York and Alumni Association of St. Luke's Hospital, died suddenly from heart disease, at his home in New York City, October 2 aged 57

Arnold Plumer Gilmore, M D Jefferson Medical College, Philadelphia, 1874, formerly of Winona, Minn, but for more than 20 years a resident of Chicago, and a specialist on diseases of the eye and ear, president of the Columbus Safe Deposit Company, and one of the principal owners of the Columbus Memorial building, one of the members of the first board of trustees of the Sanitary District, died at his home in Chicago, October 10, from Bright's disease, after a long illness, aged 55

Jerome B Snyder, M.D Chicago Medical College, 1864, a veteran of the Civil War, for two years a member of the city council, and for seven years president of the board of education of Polo, Ill, United States examining surgeon for four years, a member of the Ogle County Medical Society, died at his home in Rowan, Iowa, September 29, after a long illness, from cancer of the stomach, aged 62

Frederick Crang, M.D College of Physicians and Surgeons, Keokuk, Iowa, 1877, who attended medical lectures in Glasgow, Scotland, and was also a licentiate of Apothecaries' Hall, London, and practiced in England for 20 years, for many years a minister of the Congregational Church, died at his home in Forest Grove, Ore, September 26, from arteriosclerosis, aged 84

Emil Wilhelm Hoeber, M.D New York University, New York City, 1876, a member of the Medical Society of the County of New York, and of the German Medical Society, coroner from 1894 to 1897, during the administration of Mayor Strong, and United States pension examining surgeon, died at his home in New York City, October 5, after a short illness, aged 73

Charles Grimsley Elliott, M.D Medical Department of Washington University, St. Louis, 1891, a pioneer physician of Oklahoma, and superintendent of the first territorial hospital for the insane, at Fort Supply, died in Blackwell, Okla, after a fall down the stairs of his office, September 30, aged 41 He had had organic heart disease for some time.

Crittenden E Barnes, M.D Rush Medical College, 1883, city physician of Burlington, Iowa, from 1887 to 1892, a member of the staff and of the executive board of St Francis Hospital, house surgeon of the Chicago, Burlington & Quincy Hospital in 1883, died at his home in Burlington, September 30, after an illness of five years, aged 45

George S Armstrong, M.D Toronto University Medical Faculty, 1879, a member of the American Medical Association, for many years physician of the Spokane Falls & Northern Railway, and one of the most widely known practitioners of Washington, died at his home in Corbin Park, Spokane, October 1, from nephritis, aged 48

Minerva M Greenway, M D, C.M Trinity University, Toronto, 1899, of Toronto, lecturer on diseases of women at the Woman's Medical College, secretary of the alumnæ association of that institution, died at St Michael's Hospital, October 4, from typhoid fever, after an illness of 10 days

Morse Stewart, M.D Geneva (N Y) Medical College, 1841, one of the founders of Harper Hospital, said to have been the oldest practitioner of Detroit, Mich, where he had practiced constantly for 64 years, died suddenly at his home from cerebral hemorrhage, October 9, aged 88

Guilford Dudley Elder, M.D University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1877, a veteran of the Civil War, a member of the McLean County (Ill) Medical Society, died suddenly October 1, at his home in Bloomington, from cerebral hemorrhage, aged 59

Walcott Noble Griswold, M.D Castleton (Vt) Medical College, 1857, who had been suffering from malignant disease for several years, committed suicide by shooting himself through the head, in his room at the Hahnemann Hospital, San Francisco, October 4, aged 79

John W Dryer, M.D Milwaukee Medical College, 1901, twice president of the alumni association of his college, and a practitioner of Milwaukee, died at his father's home in Reedsburg, Wis from laryngeal tuberculosis, after an illness of two years, aged 40

Marie E Frahm, M.D Northwestern University, Woman's Medical School, Chicago, 1899, formerly a practitioner of Mattoon, died at her home in Tuscola Ill, September 30, from cerebral hemorrhage, after an illness of one week, aged about 30

Guy Dudley Hoag, M.D Bellevue Hospital Medical College, New York City, 1897, a member of the Lawrence County (Pa) Medical Society and the Physicians' Club, died at his home in Newcastle Pa, October 6 from tuberculosis, aged 31

C P Allen, M.D Nashville (Tenn) Medical College 1857, died at his home in Sharon Tenn, September 23, aged 72

William H. Shackford, M.D College of Physicians and Surgeons, Baltimore, 1871, died at his home in Roanoke, Va, October 4, from concussion of the brain, due to an accident a week before, when a bale of hay fell on him, aged 49

Thomas J Scott, M.D New Orleans School of Medicine, 1860, a resident of Alvin, Texas, for several years local surgeon for the Gulf, Colorado & Santa Fe Railway, was found drowned in Galveston Bay, October 1, aged 68

Francis M Smallwood, M D Kentucky School of Medicine, Louisville, 1887, of Chillicothe, Ohio, at one time health officer, died recently at his home in that city from paralysis, after an illness of two years, aged 48

H. G Van Sandt (Years of Practice, Illinois), a veteran of the Civil War, a trustee of the Illinois State Normal School, Charleston, died at his home in Montrose, Ill, September 21, from cerebral hemorrhage, aged 63

Victor Haischer, M.D College of Medicine, Syracuse (N Y) University, 1905, an interne in the Hospital of the Good Shepherd, Syracuse, died suddenly at that institution, September 24, from acute nephritis, aged 25

Harvey R. Winchell, M.D State University of Iowa, Homeopathic Medical Department, Iowa City, 1882, died at his home in Rich Hill, Mo, September 29, from heart disease, after a short illness, aged 70

Andrew M. Jones, M.D Jefferson Medical College, Philadelphia, 1869, formerly of Corydon, Ind, but of late a resident of Pine, Colo, died in Denver, October 1, from lung disease after a long illness, aged 63

Silas B Dickerman, M.D Hahnemann Medical College, Philadelphia, 1870, for a number of years a member of the school board, died at his home in Abington, Mass, October 1, after a prolonged illness, aged 57

Charlotte Fitz Gerald, M D University of Michigan, Homeopathic Medical College, Ann Arbor, 1879, of Ann Arbor, died at the home of her sister in Plymouth, Mich, from heart disease, October 4, aged about 60

Reuben H. Baker, M D Chicago Homeopathic Medical College, 1890, of Pearl City, Ill, died at St Francis Hospital, Freeport, Ill, October 9, two days after an operation for appendicitis, aged 42

Peter W Allen, M.D Medical College of Virginia, Richmond, 1869, a Confederate veteran, died at his home near Ford's Station, Va, October 7, from paralysis, after an illness of several months, aged 66

R. Connelly Church, M.D Medical Department of the University of Tennessee, Nashville, 1893, of Mountain City, Tenn., died October 11 from a gunshot wound, said to have been self inflicted, aged 35

Thomas Rockwell Crittenden, M.D College of Physicians and Surgeons in the City of New York, 1849, the oldest practitioner of Dover, Del, died at his home in that city, September 27, aged 84

Samuel R. Sample, M.D Jefferson Medical College, Philadelphia, 1857, a veteran of the Civil War, died suddenly at his home in Intercourse, Pa, from heart disease, September 30, aged 72

John Pirnat, M.D Miami Medical College, Cincinnati, 1867, for almost 40 years a practitioner of Evansville, Ind, died at his home in that city, October 10, after an illness of one week, aged 63

William Scott Mullins, M.D Pulte Medical College, Cincinnati, 1876, formerly of Henderson, Ky, died in the Riverside Hospital, Paducah, Ky, October 4, from heart disease, aged 52

Edward Bliss Foote, M.D Penn Medical University, Philadelphia, 1860, died at his home in Larchmont, N Y, October 5, after a long period of invalidism, from senile debility, aged 77

Lyman Atkins, M.D Philadelphia University of Medicine and Surgery, 1866, formerly of Kouts, Ind, died at his home in Valparaiso, Ind, September 20, from senile debility, aged 87

Oscar B Johnson, M.D Medical College of Indiana, Indianapolis, 1879, an old practitioner of Hendricks County, Ind, died at his home in Lizton, Ind, August 4, aged 58

Michael Joseph Madigan, M D New York University, New York City, 1874, died at his home in Staten Island, N Y, September 7, after an illness of one year, aged 56

George A. Williams, M.D St Louis Medical College, 1865, one of the oldest practitioners of southern Illinois, died at his home in Hardin, September 30, aged 65

Thomas Y Lewis, M D Kentucky School of Medicine Louisville, 1858 died at his home in Dublin Texas, September 30 after an illness of several weeks, aged 70

W J Robinson, M.D Eclectic Medical Institute, Cincinnati, 1867, of Eaton, Tenn, died at the home of his son, near Trenton, Tenn, August 31, aged 70

L E White, M.D American Eclectic Medical College, Cincinnati, 1896, died at his home in Muncie, Ind, September 20, from accidental cocain poisoning

John A Beecher (Examination Massachusetts), died at the home of his sister in Rochester, N H, September 30, aged 57

Robert Schmelter, M.D University of Würzburg, Germany, 1879, died at his home in Brooklyn, October 11, aged 55

J G Greene, M.D Atlanta (Ga) Medical College, 1884, died at his home in Cartersville, Ga., October 2

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

ANOTHER AUTOMOBILE NUMBER?

Webster, N Y Oct 8 1906

To the Editor —I wish you would publish another Automobile Number of The Journal. It seems to me that it would be appreciated by a very large majority of the members and subscribers If it could come some time during December or January it could give us the experience of another season and be in time to give its pointers to aid in selecting our machines for next season

Wm Stanton M.D

[The 'Automobile Number' was highly appreciated by many of our readers, judging from the commendatory letters received but whether or not it is worth while to devote a number to the subject this winter we are not able to decide. We shall be glad to receive postal card advice from those interested —Editor.]

LIABILITY OF CORPORATIONS FOR MEDICAL SERVICES TO EMPLOYES

New Castle, Pa., Oct. 8 1906

To the Editor —Several times I have been called on to attend accident or emergency cases of employés by officials or other employés of the company After attending one case I presented my bill and was refused payment because I was not the company physician. Would I be justified in declining to accept further requests for attendance? In referring to a similar instance a local paper called a physician "inhuman for refusing to attend B

Answer.—As a general legal proposition subject to more or less exceptions corporations do not seem to be liable for medical attendance on injured employés Nor have minor officials or other employés thereof inherent power to bind corporations to pay for medical services. Whether the higher officials have such power or not often requires a lawsuit to determine. See the following decisions reported in the Medicolegal Department of The Journal of dates named Jan 21 1905 page 244 Bond vs Hurd (Mont) Feb 25 1905 page 655 Harris vs Vienna Ice Cream Co (N Y Sup) July 15 1905 page 210 J H Mohlman Co vs American Grocery Co (N J) Aug 25 1906 page 638, Miller vs. Beaver Hill Coal Co (Ore) Sept. 15 1906 page 893 Nelson R Hall vs New York, New Haven & Hartford Railroad Co (R I)

The question 'Would I be justified in declining further requests for attendance?' is answered by the Principles of Ethics which says "The broadest dictates of humanity should be obeyed by physicians whenever and wherever their services are needed to meet the emergencies of disease or accident. A physician should not refuse emergency calls where life is at stake no matter what the provocation may be to tempt him to do otherwise

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers U S Army, week ending Oct. 13 1906

Hevsinger J D asst surgeon ordered from San Francisco Cal to Washington D C to report to the Surgeon General for duty

Stedman C. J asst. surgeon ordered to return from Newport News Va., to his proper station Fort Stevens Wash.

Bispham W N., asst. surgeon relieved from present temporary duties and will return to his proper station Fort Logan Colo

Lewis W F asst. surg ordered from Newport News Va to Fort Monroe Va. for temporary duty

Wakeman W J surgeon granted an extension of four months to his sick leave of absence

Kirby Smith R. M asst surg., granted an extension of two months to his leave of absence

Ford Clyde S asst. surg operation of his order for Philippine service is suspended until further orders

Palmer Fred W asst. surg granted 15 days leave of absence.

O Connor R. P, asst. surgeon arrived at Fort Leavenworth, Kan for duty

Pinkston O W asst surgeon relieved from temporary duty in the Department of California, and ordered to duty in the transport service

Carter E C., surgeon returned to Fort Leavenworth Kan., from leave of absence

Boyer I L asst surgeon returned to his proper station, Fort Sam Houston Texas from leave of absence.

Ferguson J B contract surgeon returned to duty on the transport *Dix* from leave of absence.

Daywalt G W contract surgeon returned to duty at Fort De Soto Fla. from sick leave.

Ames, R. P contract surgeon left Fort St. Philip, La and arrived at Jackson Barracks La. for temporary duty

Van Kirk H H contract surgeon, returned to Fort Sill, Okla., from leave of absence

Richardson W H, contract surgeon, ordered to Fort Monroe Va., for temporary duty

Bell R P, contract surgeon, ordered to Fort Monroe Va. for duty

Baker C L contract surgeon relieved from further duty at Honolulu H T and ordered to Fort Totten N Y for duty

Bailey E, contract surgeon, relieved from further duty in the Philippines Division and ordered to Fort H G Wright, N Y for duty

Repp J J contract surgeon ordered to the Army General Hospital Washington Barracks D C for duty

Sanford J L contract surgeon relieved from further duty in the Philippines Division and ordered to Fort Washington Md for duty

Brown I C contract surgeon reported for duty at Fort McIntosh Texas from sick leave of absence

Hughes Michael E contract surgeon granted leave of absence for four months in the United States

Navy Changes

Changes in the Medical Corps, U S Navy for the week ending Oct. 13 1906

Bogan F M, P A. surgeon, to the Naval Hospital, Washington D C for treatment

Boyd J C Medical Director to duty in command of the U S Naval Medical School Hospital Washington D C.

De Bruler J P asst. surgeon to duty at the U S Naval Medical School Hospital Washington, D C.

Braisted W C surgeon detached duty at the U S Naval Medical School Washington D C, etc., to duty as assistant to the Bureau of Medicine and Surgery Navy Department Washington D C

Russell A C H surgeon to the U S Naval Medical School and additional duty as member of the Naval Medical Examining Board Naval Medical School, Washington D C

Castro, D H acting asst surgeon appointed an acting assistant surgeon in the United States Navy from October 6 1906

Donelson M. acting asst surgeon appointed an acting assistant surgeon in the United States Navy from October 6 1906

Pickrell G surgeon to the Bureau of Medicine and Surgery Navy Department, Washington, for special duty

De Bruler J P P A. surgeon commissioned a P A. surgeon in the United States Navy from January 3 1906

Dean I W S P A. surgeon commissioned a P A. surgeon in the United States Navy from January 26, 1906

Manchester J D P A. surgeon commissioned a P A surgeon in the United States Navy from June 10, 1906

Verner W W P A. surgeon commissioned, a P A. surgeon in the United States Navy from May 25 1906

Rennie W H P A. surgeon commissioned a P A surgeon in the United States Navy from May 25 1906

Woodward, J S P A. surgeon commissioned a P A. surgeon in the United States Navy from June 10 1906

Abeken F G P A. surgeon commissioned a P A. surgeon in the United States Navy from July 10 1906

Public Health.

List of changes of station and duties of commissioned and non commissioned officers of the public health and marine hospital service for the seven days ended Oct. 10 1906

Gardner C. H., P A. surgeon relieved from duty at Galveston Texas, and directed to proceed to San Francisco reporting to the Medical Officer in Command for duty and assignment to quarters

Corput C M P A. surgeon relieved from duty at New Orleans, and directed to proceed to Galveston, Tex. and assume command of the service at that port

Ebert H G asst surgeon, relieved from duty on the Revenue Cutter *Perry* and directed to assume command of the service at Seattle Wash.

Ebert H G asst surgeon granted leave of absence for fifteen days

Salmon T W asst. surgeon granted leave of absence for fourteen days from Oct. 21 1906.

Simpson Friench asst surgeon directed to proceed to Baltimore reporting to Medical Officer in Command for duty and assignment to quarters.

Herring R. A., asst surgeon directed to report to the Medical Officer in Command New Orleans, for duty and assignment to quarters

Palley C. W., acting asst. surgeon granted leave of absence for ten days from Aug. 16 1906, on account of sickness.

Cleaves F H acting asst. surgeon granted leave of absence for four days from Oct 2 1906 under Paragraph 210 of the Regulations.

Houghton M W acting asst surgeon granted leave of absence for fifteen days from Oct 17 1906

Hunter W R acting asst surgeon granted leave of absence for fourteen days from Oct 10 1906

Stanton J G., acting asst. surgeon granted leave of absence for thirty days from Oct. 9 1906

BOARD CONVENED

A board of medical officers was convened to meet at Galveston, Tex. Oct. 10 1906 for the purpose of examining candidates for cadetships in the Revenue Cutter Service Detail for the board Passed asst. surgeon C H Gardner, chairman acting asst. surgeon William Gammon, recorder

Health Reports.

The following cases of smallpox yellow fever cholera and plague have been reported to the Surgeon-General Public Health and Marine-Hospital Service during the week ended Oct. 12 1906

SMALLPOX—UNITED STATES

Colorado General Aug 1 31 30 cases
Kansas General Aug 1 31, 29 cases.
Louisiana New Orleans Sept 22 29 8 cases
New York New York Sept. 22 29 1 case.
North Carolina General Aug 1 31, 12 cases
Ohio Cincinnati Sept. 29 Oct. 5 1 case

SMALLPOX—FOREIGN

Africa Capetown Aug 18 25, 3 cases.
Canada Winnipeg Sept 22 29 2 cases.
Chile Iquique, Aug 18 Sept 1 present
India Calcutta Aug 11 18 2 deaths.
Italy General Sept. 13 20 3 cases
Russia Odessa, Sept. 8-15, 1 case

YELLOW FEVER

Costa Rica Limon, Sept. 25 1 case.

Cuba Habana, Oct. 5 10 1 case, 1 death Santa Clara Province, Oct. 5-11 2 cases 1 death

Mexico Merida, Sept. 23 29 4 cases, 4 deaths Tuxtepec, 1 case Vera Cruz, 1 death

CHOLERA.

China Shanghai Sept. 24 Oct 7 87 deaths
India Calcutta Aug 11 25 29 deaths

PLAGUE

Egypt Alexandria Sept. 14 19, 3 cases 1 death Suez 7 cases, 4 deaths

India General Aug 11 18 1 037 cases 2,118 deaths Calcutta, Aug 11 25, 1 case 25 deaths

Japan Osaka Oct. 10 present.

Persia Seistan Province June 23-July 27, 28 cases 37 deaths

Society Proceedings

COMING MEETINGS

Mississippi Valley Medical Association Hot Springs Ark, Nov 7 8
American Public Health Assn, Mexico City Dec. 3-7
Southern Surg and Gyn. Assn., Baltimore Dec. 11 13

COLORADO STATE MEDICAL SOCIETY

Thirty sixth Annual Meeting, held at Denver, Oct 9 11, 1906

The President, Dr. H. G Wetherill, in the Chair

Work of the House of Delegates.

Advertising by means of local puffs and personal write-ups in the daily, weekly and other papers was condemned by the House of Delegates, and constituent societies urged to use every legitimate means to stamp it out

The House of Delegates commended the action of the Board of Trustees and the Editor of The Journal of the American Medical Association and its Council on Pharmacy and Chemistry in investigating and placing before the profession the facts regarding pharmaceutical preparations of the class extensively advertised to physicians

The house passed a resolution to the effect that the practice of giving or taking a commission for referring patients is unprofessional, dishonorable and dishonest.

The Committee on Medical Education made a report in which it favored the minimum standard of medical education as adopted and recommended by the American Medical Association, July, 1905, and the House of Delegates adopted it as the minimum requirements of the society These requirements are

1 Preliminary requirements to be a high school education or its equivalent such as would admit a student to one of our recognized universities.

2. Preliminary requirements to be passed on by a state official such as the superintendent of public instruction and not by an official of a medical college

3 A medical training in a medical college, having four years of not less than thirty weeks each year of thirty hours per week of actual work.

4 Graduation from an approved medical college requiring the candidate to pass an examination before a state medical examining board

5 The passing of a satisfactory examination before a state medical examining board.

The house further recommended that the legislative committee of the society be instructed to recommend to the Colorado State Board of Medical Examiners the adoption of these minimum requirements, to go into effect Jan 1, 1908

The house expressed itself as being in hearty accord with the movement to demand from insurance companies a fee of not less than $5 00 for every complete examination made irrespective of the amounts of the policies It was further urgent on constituent medical societies, that have not already done so, to take proper steps to enforce these demands

The house endorsed and ratified the action of the National Congress in passing a pure food law, and urged the passage of a law in Colorado at the next legislature along identical lines

Officers

The following officers were elected for the ensuing year President, Dr H R Bull, Grand Junction, vice presidents, Drs Herbert B Whitney, Denver, E R Neeper, Colorado Springs, Mary E Phelps, Canon City, and O P Johnston, Boulder, secretary, Melville Black, Denver, treasurer, S E Solly, Colorado Springs, delegate to American Medical Association for two years, J M. Hall, Denver, alternate, T Mitchell Burns, Denver

The next meeting will be held in either Denver or Glenwood Springs Sept 17, 1907

Ocular Headaches

Dr Edmund W Stevens Denver, said the relation of eye strain to headaches and other neuroses was first pointed out by Mitchell and Thomson thirty years ago The medical profession has been slow to appreciate the importance of the subject Eyestrain is the most common cause of headache in the otherwise healthy Ocular headaches come on at any age, but are very frequent from 6 to 12 years of age, and again with beginning presbyopia They are indistinguishable in character and position from headaches due to any other agency He discussed the relation of eyestrain to migraine The adjustment of proper glasses does more for the relief of migraine than any other treatment. He emphasized the importance of carefully measuring errors of refraction under a mydriatic.

Importance of Early Recognition and Treatment of Squint.

Dr. John M Foster, Denver, said that parents and physicians often fail to detect squint on account of its periodicity, and they frequently are misled between squint and paralytic muscular troubles The etiologic factor in the majority of cases of cross eye is an error of refraction The difficulties in determining these errors have been greatly simplified by the use of object test cards, cycloplegia and retinoscopy The importance of early detection of refractive errors was pointed out, also the application of devices for exercising the weakened muscles, thereby increasing their strength sufficiently to enable them to maintain the correct position of the eye after it has once been obtained The conservative methods are especially insisted on, as very few young children should be operated on for squinting eyes The percentage of cases cured where properly fitted and fitting glasses are used is large if combined with proper exercises for the weakened muscles

In advanced unilateral convergent squint there is always a loss of vision in the deviating eye, frequently of a high degree It is in these cases, especially in young children, that our ingenuity is taxed to not only preserve what vision there is in the poor eye but to increase it by correction of refractive errors and the use of cycloplegics

Acute Suppurative Otitis Media and Mastoiditis

Dr. William C Bane, Denver, reported the case of a patient, aged 19 years, who was examined fifty five hours after inflammation began The membrana tympani was incised followed by a free discharge of bloody serum The discharge contained streptococci The pain in the ear and mastoid with elevation of temperature, persisted. On the eighth day of inflammation he operated on the mastoid. The cells were grayish and contained pus On the morning of the fifth day after operation the pulse was 65 and the temperature 99 F., yet the wound had a pale appearance Evening temperature was 101 4 On the sixth day at noon the patient had a severe chill, pulse, 120, temperature 104 There was tenderness over the lateral sinus and internal jugular vein At 8 p m the sinus was uncovered and incised, exposing a clot The internal jugular was excised and a thrombus removed from the sinus by Dr Lyman. Patient left the hospital the twenty fourth day after the mastoid operation

(To be continued)

BRITISH MEDICAL ASSOCIATION

Seventy fourth Annual Meeting held in Toronto, Ontario, Aug 21 25, 1906

(Continued from page 1222)

SECTION OF OBSTETRICS AND GYNECOLOGY

Relation of the Gynecologist to the General Practitioner

A F Freeland Barbour, M.D Edinburgh, the president, in his introductory remarks, discussed the erroneous idea which commonly prevails regarding gynecology The student believes that gynecology, inasmuch as it refers to diseases peculiar to women, has a special pathology separate from that of general pathology He fails to recognize that aside from the anatomic peculiarities and the physiologic changes involved, there is no difference between salpingitis and appendicitis, and that epithelioma of the cervix does not differ pathologically from epithelioma of the lip The great majority of gynecologic cases must first be in the hands of the general practitioner, who makes the first diagnosis of the conditions of the patient and outlines the routine treatment Specialism in gynecology, apart from major gynecologic operations, is more akin to specialism in diseases of the heart and lungs than to specialism in the sense of mental diseases or diseases of the eye The way of the specialist in gynecology passes through the domain of the general practitioner, and the specialist is called in when the general practitioner recognizes that he has not the training nor experience to enable him successfully to diagnose his case or treat his patient While gynecology should be taught as a specialty, it should be taught in relation to medicine, surgery and obstetrics A great fault in the medical education of to-day is that each subject is taught by itself, instead of in its relation to other portions of the medical curriculum

SECTION OF THERAPEUTICS

An Imperial Pharmacopeia.

Donald McAlister, M.D, Cambridge, England, the president, in his introductory remarks, spoke in behalf of the British Pharmacopeia, noted the lack of harmony in the various national pharmacopeias and suggested that the British Pharmacopeia should be adapted to the needs of all the nations included in the British dominions He is investigating the possibilities of the proposal

Medical Reciprocity

The president also considered the question of medical reciprocity, in which he pointed out that by the medical act of 1886, an individual holding a recognized colonial medical diploma, granted to him in a British possession and who is of good character, is legally entitled to practice medicine in that possession, and is also entitled without examination to practice in the United Kingdom and to be registered in the official Medical Register Before a colonial diploma can be thus recognized however the provincial council must be satisfied that the British *possession in question affords* to the home-registered practitioner such privileges of practicing therein as may seem just. Orders in council have been issued applying the act to New *Zealand* the states of Australia, India Ceylon and Malta, all of which grant medical *diplomas* As these diplomas are recognized by the Medical Council their holders are at once capable of registration and of acquiring all the rights and privileges conferred thereby A similar enactment exists in relation to foreign countries and Italy and Japan thus far have been afforded corresponding privileges With the exception of Nova Scotia, no province of Canada has as yet applied for admission Under the existing conditions a graduate of Ontario or Quebec cannot legally hold a medical appointment in the royal army or navy, he can not be appointed surgeon to a British ship or to any hospital or other publicly established body or institution in the United Kingdom, he is ineligible as a medical officer of health, he can not be a condidate for a diploma in hygiene or state medicine, and he may not use his degree as a qualification for private practice in any British possession governed by the medical act The president urged the mutual recognition of professional qualification, that these disabilities might be removed, feeling sure that educational interchange would excite a powerful influence for good not only in the Canadian provinces, but in Great Britain itself

The Alcohol Question.

DR. A. D BLACKADER, Montreal, discussed the use of alcohol in treatment. He spoke of the antiquity of alcohol as a remedial agent and said that in the last twenty years considerable opposition had been manifested. The author feels that the stimulation of the heart from alcohol has been over estimated, and that it is somewhat feeble and transitory, but that its action on the nervous system is more complex, and that it is more depressing on the centers of judgment, discernment and self control In resisting the powers of bacteria, the use of large doses of alcohol has not been justified by experiments As a food, alcohol can be utilized when other foods can be given only with difficulty, and it aids in the digestion of other foods. In fever and other conditions of exhaustion, alcohol does not tax the digestive apparatus, and increases the secretions that aid digestion Used judiciously, alcohol, in his opinion, leaves fewer after-effects than other narcotics

SAMUEL J MELTZER, M D, New York City, advocated the medicinal use of alcohol He considered its use invaluable in the treatment of typhoid He advised moderate doses and believed that alcohol properly used does good The consensus of opinion among medical men is that it does no harm, and that in proper doses actual benefit results from its use. It increases blood pressure and corrects the distribution of the blood While in health, alcohol may be a posion, it is a beneficent drug in diseases

SECTION OF PHYSIOLOGY

At the joint meeting of the sections of Physiology and Medicine a discussion was held on "Over Nutrition and Under Nutrition, with Special Reference to Proteid Metabolism"

PROF R. H. CHITTENDEN of Yale University, New Haven, related the results noted by him in a series of experiments relating to proteid metabolism His special theme was the diet necessary to maintain health with the smallest amount of work by the organism He questioned whether or not the human diet might be more in harmony with the minimum of proteid required. He believes in a variation of diet and that a vegetable proteid, like the gluten of wheat, is far more nutritious than ordinary meat. His final advice was that we should go to work to acquire knowledge of the physiology of nutrition, about which we now know so little In his experiments, which he detailed, five professional men had lived from six to nine months on from 34 to 56 grams of proteid matter daily, or not more than one-half the standard quantity used There is no evidence, the author stated, that if continued, this would be satisfactory, but he, himself, had carried it on for four years and a half, with great gain to bodily strength, with no deterioration of blood, with increase of power and decrease of fatigue. He asserted that more people suffer from the effects of over eating than from those of alcohol From experiments on animals, he found that disease resistance is much increased by a low proteid diet that oxidation is lower, and that the organism works more economically

PROF WILLIAM D HALLIBURTON, London, agreed with the results of Professor Chittenden but stated that experiments on animals are not conclusive The coefficient of proteid matter for animals and also for human beings varies He considers high feeding responsible for many of the so-called "open air" cures for phthisis Less reserve force is a vague term, but if we are living on the margin of our needs, when privation comes there must be a breakdown An infant takes probably ten times the amount of nourishment it needs While this is a physiologic error, it is so arranged by Nature The excretory organs are sufficiently large, active and ready for the daily turnover In the larger amount of food used by the body, there may be a small amount of the substances used for tissue repair, and this may be the cause of the intake, which seems at first larger than necessary

OTTO FOLIN, Ph.D, Waverly, Mass, considered the use of cooked muscle as an aid to muscular energy, as more or less of a superstition Many practices prevail among civilized nations which no scientific men recommend Alcohol, for instance, is freely taken, but no physician will recommend the corresponding amounts as desirable The universal desire to avoid useful work is at least as widespread as the desire for excessive proteid consumption, but this is looked on as a cause of moral degeneracy

DR ROBERT HUTCHINSON, London, believed that the proteid question was not to be solved except by the coöperation of physiologists and medical men, and that we want not the proteid minimum, but the proteid optimum He accepted Professor Chittenden's minimum and recognized the great service to medicine by the American school, but could not accept the deductions that the least was necessarily the best It is possible to get along with but one lung or one kidney, but two have been provided and are preferable.

(To be concluded)

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Fifty sixth Annual Meeting, held in Bedford Springs, Sept 10 13, 1906

(Concluded from page 1221)

Oration on State Medicine

DR. SAMUEL G DIXON, Health Commissioner of Pennsylvania, made a plea for vaccination and referred to the fact that a year ago the Department of Health had been instrumental in enforcing the law of 1895, providing that unvaccinated children could not be admitted to school Since then hundreds of thousands of children have been made immune against smallpox by vaccination He also outlined the work of the department in the fight against typhoid fever and in the distribution of diphtheria antitoxin The midwifery evil, he said, is receiving the attention of the department as well also as the securing of pure water to the people of the state

Bearing on the Oration on State Medicine the *following* resolution was passed

> WHEREAS There is a reported large mortality following child birth which is due to preventable infection and other accidents of labor and
>
> WHEREAS The state has increased the public safeguards requiring an examination of physicians before allowing them to practice midwifery be it
>
> *Resolved* That a committee of nine be appointed by the president of the State Medical Society to formulate an act, to be introduced before the legislature of the State of Pennsylvania, establishing a legal standard of education for midwives which may be as far as possible, in harmony with the best standards in force in other states.

Stenosis of Pylorus

DR GEORGE S DICKINSON, Erie, cited illustrative cases In one case the condition was attributed to the constant pressure of *the stomach against the desk, in a man, aged 50,* who had been a book keeper for a great many years

DR. JOHN A. LICHTY, Pittsburg, said that pyloric stenosis must be differentiated from simple atonic dilatation of the stomach, the vomiting of pregnancy, simple hyperchlorhydria, right movable kidney, gastroptosis, gastric neurasthenia Treatment in complete cases is necessarily surgical, and pyloroplasty or pylorectomy the desirable procedure although the mortality is still high For this reason posterior gastroenterostomy is the operation most frequently employed Medical and dietetic treatment are advised in partial stenosis

Gastroptosis, Its Treatment.

DR. JOHN J GILBRIDE, Philadelphia, said that in diagnosis determination of the lower boundary of the stomach is not sufficient the lesser curvature in a lower position than normal being essential Treatment should be preventive so far as possible The bandaging of the abdomen during the lying in period was advised Mechanical and medical treatment should be persistently tried before surgery is resorted to The preferable surgical procedure is the one employed by Beyea

Peculiar Atrophic Affection of the Skin in a Neurotic Subject.

Dr. Rudolph Myers, Huntingdon, reported the case of a lady of neurotic tendency, who, after a slight scratch on the ring finger, observed that the skin on the back of the finger had become dark and sunken in a space three fourths of an inch long and half an inch wide Fourteen gangrenous points in all formed A second attack ensued, beginning near the elbow, and attacks recurred every seven days until she had six The case was regarded as one of neurotic gangrene.

Salt-Free Treatment of Epilepsy

Dr. Alfred Gordon, Philadelphia, said that it has been shown that NaCl plays a great rôle in the normal metabolism of the body by influencing the elimination of waste products Applied to epilepsy its presence in the diet increases the severity and the frequency of seizures Its withdrawal shows *a beneficial effect*

Diagnostic Significance of Herpes Simplex in Infectious Diseases

Dr Jay F Schamberg, Philadelphia, concludes that herpes zoster, both the facial and genital varieties, while not clinically identical, are closely related that it is highly probable that the vast majority of all cases of herpes of the various types are the result of the action of a toxin The frequency of herpes simplex in certain infectious diseases and its rarity in others is regarded as evidence that the toxin possesses certain qualities in order to exert a selective affinity for sensory nerve structures The toxin producing herpes simplex and herpes zoster is in all probability not the result of the action of any specific *micro organism Pneumonia, spotted fever, and malaria* are diseases in which herpetogenic toxin develops with a fair degree of constancy Its frequency in these diseases and its rarity in typhoid fever and other infectious maladies make its appearance a symptom of considerable diagnostic import The history of the tendency of certain individuals to recurrent attacks of facial herpes from slight indispositions should, however, be elicited before according to herpetic outbreaks the diagnostic value mentioned

Relation of Cardiac Muscle and Valves to Arterial Tension.

Dr. W M. Stanton, Philadelphia, said that the factors concerned in arterial tension are the heart, the arteries the vessels under the control of the vasomotor system, and the quality *of the blood* With *poor nutrition the reserve power of* the heart is soon used up, and hypertrophy failing, signs of lost compensation appear at an earlier period In blood pressure estimates made under his direction in cases of tuberculosis the most marked urinary evidences in the way of albumin and casts were not accompanied by increased pressure In 21 cases the highest systolic pressure was 145, and only in *eight cases was the systolic pressure 100 or over* The poor nutrition was suggested as explanation of this fact

Other papers read were, "Retinal Asthenopia," by Dr Jos E Willetts, Pittsburg, "Pathology of Goiter," by Dr George P Mueller, Philadelphia, "Surgery of Thyroid Gland," by Dr R G Le Conte, Philadelphia, "Brain Complications Following Mastoiditis," by Dr F W Frankhauser, Reading, "Photographic Illustrations in Modern Medical and Surgical Literature," by Dr C B Longenecker, Philadelphia, "Laryngectomy for Malignant Disease" and "Demonstration of Bronchoscopy and Esophagoscopy," by Dr C Q Jackson, Pittsburg, "Some New Features of the U S P " by Dr A Koenig, Pittsburg, 'Electricity in Treatment of Disease," by Dr J V Shoemaker, Philadelphia, "High Frequency Current in Advanced Pulmonary Tuberculosis " by Dr M L Barshinger, York, "High Frequency Current in Rheumatoid Arthritis," by Dr G E. Pfahler, Philadelphia, 'Diagnosis of Brain Abscess," by Dr J W Boyce Pittsburg "Pernicious Anemia with Jaundice," by Dr John G Wilson Montrose "The Trained Nurse in the Public Schools," by Dr S W Newmayer, Philadelphia, "Smallpox," by Dr J W Ellenberger, Philadelphia, "Quarantine," by Dr A B Brumbaugh, Huntingdon, "Fixation of Movable Kidney," by Dr G E Shoemaker, Philadelphia, "Surgical Exploration in Abdominal Complications of Typhoid," by Dr J B Roberts, Philadelphia, "Fractures of Head of Radius," by Dr T T Thomas, Philadelphia, "Cleft Palate," by Dr H. R. Wharton, Philadelphia, "Surgery of the Thoracic Cavity," by Dr J C O'Day, Oil City, "Surgical Tuberculosis," by Dr Geo W Guthrie, Wilkesbarre, "Hydrophobia and Its Treatment," by Dr H. D Jump, Philadelphia, "Aids in Teaching Climatology and Climatotherapy," by Dr G Hinsdale, Hot Springs, Va , "Hypertrophic Pulmonary Osteoarthropathy," by Dr H M. Landis, Philadelphia, "Symptomatology and Diagnosis of Lobar Pneumonia," by Dr James J Johnston, Pittsburg, "Certain Complications of Lobar Pneumonia, Considered with Reference to Surgical Interference," by Dr P Y Eisenberg Norristown, "Treatment of Lobar Pneumonia," by Dr James M Anders, Philadelphia, "Clinical Results from Examination of Feces After Intestinal Test Meal," by Dr Clement R Jones, Pittsburg, "Relation of the Lymph Glands in the Mediastinum to Disease and their Value in Early Diagnosis," by Dr William S Newcomet, Philadelphia

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AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS

Nineteenth Annual Meeting, held at Cincinnati, Sept 20 22, 1906

(Concluded from page 1220)

The Rectum in Its Relation to Diseases of Women

Dr H O Pantzer, Indianapolis, said that a faulty function of either of the relevant organs might arrest or modify the function of its neighbor Chronic constipation, at times, affected the quantity, frequency, or course of the menstrual flow Rectal touch, he said, is practiced very little The beginner should employ the rectal touch to get his first true impressions of the pelvic organs in the body, and the expert can not afford to dispense with it. The variable conditions of the rectum, as found by both vaginal and rectal examination, are of great diagnostic and therapeutic interest The rectum in the multipara always shows deviations from the normal, connected with the events of parturition and puerperality In sequence these deviations became accentuated There are remarkable differences recognized which have different bearings and should have varied treatment, medicinal and operative The rectal temperature in pelvic diseases has special significance The oral temperature in these cases is often misleading The rectal temperature may be anywhere from one-half to three degrees more than the oral temperature The recognition of a febrile disease or its gravity might depend on this procedure, making it obligatory to take the record of both sites

Trend of the Times in Appendicectomy

Dr. N Stone Scott, Cleveland, Ohio, said that the next step in progressive surgery is the perfecting of the technic, with an eye single to the best interests of the patient, even to the smallest detail Mere recovery was no longer all sufficient The ideal condition is health Undesirable elements can be eliminated more surely and fully if in addition to the essentials heretofore considered necessary, due attention is given to certain points which have been too long neglected The first of these is the choice of anesthetics The ideal anesthetic had yet to be discovered The method of operating is of utmost importance The incision should be large enough to give access to the field of operation The extent of the skin incision is of no importance, except for cosmetic effect. If the patient is fleshy, this superficial cut might of necessity be a long one In aseptic cases the fascial separation should be only sufficient to admit the tip of the index finger This is crowded through the soft parts which are dilated easily to admit the entire length of the finger Given an anesthetic with little if any attendant nausea, an incision so short as to close of itself there is no physiologic reason for the recumbent posture The author has gradually short ened not only the incision, but also the time spent by the patient in bed, for not infrequently, whether from physical overwork or nervous strain, patients need and should have a course of the rest cure But the ideal operation can be performed only on an ideal patient, one who is intelligent, obedient, hopeful, and of good recuperative ability, both mental and physical, having well-developed muscle and fascia, without excess of fat, and a movable appendix with a good mesentery, one whose condition is uncomplicated by intercurrent disease or by severe sequelæ, the result of previous attacks

Points Commonly Contested in Diagnosis and Treatment of Appendicitis.

Dr Joseph Price, Philadelphia, found in the reports of some good hospitals that patients suffering from this disease remained in the medical wards until dead, no surgical effort being made to save them This simply meant that the clinician did not yield the point that appendicitis is a surgical affection, that he did not have a precise knowledge of pathology, that he had not served his apprenticeship as a resident or as an aid to a surgeon. When the operations for appendicitis are complete the recoveries and cures pleasing, re-openings or secondary operations for complications are not necessary One prominent operator reported 24 cases of ileus in his work This meant that his work was defective Multiple incisions and drains in both the pelvic and abdominal cavities are insults both to surgery and to the peritoneum. Most operators have succeeded in saving their desperate cases by a small or a generous incision The multiple incision and drain only favors an additional point for complications Waiting and watching should not be taught or practiced, either in private or public, under skilled or unskilled observation Perforations occur under the eyes of surgeons, and good clinicians watch and endeavor to limit spreading peritonitis and infection with quick disastrous results Most good surgeons admit that they are distressed and unhappy while watching and waiting for an appendicitis that has not been operated on A perforation, a spreading infection, does thrice more harm, and kills thrice as many patients as an inexperienced operator in an early operation

Diagnosis and Surgical Treatment of Injuries to the Diaphragm

Dr John Young Brown St Louis, Mo, from a careful analysis of the cases coming under his observation, is convinced that there are present in but few of them symptoms on which a positive diagnosis of injury to the diaphragm can be made, and that in many cases when extensive injuries to the abdominal viscera are present, the patients are apparently in excellent condition, and present practically no symptoms He believes, therefore, that in all penetrating gunshot or stab wounds of the chest, where from the location of the wound it is reasonable to conclude that injury to the diaphragm is possible, the existence or non existence of such injury should be determined by proper exploration. Positive symptoms in these cases are generally the signals of peritonitis, and peritonitis of this character is usually fatal.

If this view is correct, how should we explore through the chest or through the abdomen? A penetrating wound of the diaphragm is a penetrating wound of the abdomen, and an exploration to determine the presence of such an injury which does not enable the operator to repair, if present, the associate injuries to the abdominal viscera, should not be undertaken To sew up an injured diaphragm and leave a perforated bowel or stomach will certainly prove disastrous Through an abdominal incision the extent of injury to both diaphragm and abdominal viscera can be determined absolutely If it is found that the wound in the diaphragm is so situated that it can not be repaired through an abdominal incision, thoracotomy can be done at the site of the chest wound, resecting an inch or two inches of rib With the hand in the abdomen, the diaphragm can be pushed into the thoracotomy wound making the work of repair quite easy A method which he has found very useful in dealing with injuries of this character consists of leaving both ends of the first suture long using one as a tractor This method enables the operator to work through a very small incision, and frequently does away with the necessity of resecting more than a portion of one rib

The mortality of this work always will be high. Many of these cases are mortally wounded when seen by the surgeon. There are, however, quite a few whose injuries could be repaired with satisfactory results, if operation is undertaken early He urged that more attention be paid to penetrating wounds of the lower chest, and that early exploration be undertaken as a routine procedure in all cases where injury to the diaphragm is suspected

Reflex Dyspepsias in Abdominal and Pelvic Disease, and Their Surgical Treatment.

Dr Herman E Hayd, Buffalo, N Y, said (1), the intimate nervous supply of the abdominal and pelvic organs often make one organ reflect and masquerade symptoms which represent the disease of the other Chronic appendicitis, retroversions and floating kidney very frequently produce very marked dyspeptic symptoms Gall bladder disease and often stones without jaundice are treated for simple dyspepsia (2), He made a plea for the more careful examination of operative cases Frequently many organs are involved in the symptomatology, and the patient remains uncured because of incomplete surgery (3), Serious stomach diseases producing various dyspeptic symptoms, such as ulcer, hour glass contraction, pyloric obstruction, chronic gastritis with dilatation and early cancer, should be placed among the curable surgical diseases, and should receive the unquestioned benefits of early surgical interference

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TRI-STATE MEDICAL SOCIETY OF ALABAMA, GEORGIA AND TENNESSEE

(NOW THE SOUTHERN MEDICAL ASSOCIATION)

Eighteenth Annual Meeting held in Chattanooga, Tenn., Oct 24, 1906

The President, Dr A Bennett Cooke, Nashville, in the Chair

Addresses.

Addresses of welcome were delivered by the Hon W R. Frierson, Mayor of Chattanooga, Dr Luther Freeman, on behalf of the professions, and Dr William L Nolen on behalf of the medical profession of Chattanooga These were responded to by Dr George C Savage, Nashville.

Dr A. Bennett Cooke, Nashville, the President, in his annual address entitled "Medicine and Things" denounced in scathing terms the methods adopted by the "patent medicine" manufacturers and vendors

Dr. Jere L Crook, Jackson, Tenn, in his paper, "The Attitude of Some Life Insurance Companies Toward the Profession," described and denounced the transactions of one of the life insurance companies. The paper was warmly endorsed by the members and a resolution was proposed by Dr James B Cowan, Tullahoma Tenn, and adopted, commending the stand taken by Dr Crook. A copy of the resolution will be sent to the company in question.

Reorganization.

By a unanimous vote of the members the association agreed to relinquish its charter and form the Southern Medical Association, adding the states of Louisiana, Mississippi and Florida. The states of North and South Carolina and Kentucky have also been invited to coöperate The new constitution and by laws adopted are said to be in accordance with that suggested by the American Medical Association for district associations

Election of Officers.

The following officers were elected President, Dr Henry H Martin Savannah Ga vice presidents, Drs Mack Rogers, Birmingham Ala James B Cowan, Tullahoma, Tenn, and John R. Tackert Meridian, Miss, secretary, Dr Raymond Wallace Chattanooga Tenn, and treasurer, Young L B Abernathy Chattanooga.

The first meeting of the Southern Medical Association will be held on the second Tuesday in October, 1907, in Birmingham, Ala

Therapeutics

Hemicrania.

The best results in the treatment of hemicrania, according to H C Becker in N Y *Med Jour*, are obtained by instituting treatment early in the disease or during the prodromal attack as manifested by a state of mental depression and irritability, associated with general languor Later a pain over one eye or in the back part of the head is an early sign later developing into a pain throbbing in character Under such conditions Becker states that the patient should not indulge in reading or in any exercise necessitating eye strain He should be instructed to take a saline laxative and a hot mustard footbath, and to lie down in a darkened, quiet room and to sleep, if possible Cold applications are frequently of benefit in affording relief to the severe, throbbing headache To give immediate relief the following is recommended

℞	Acetphenetidini	gr v		30
	Caffeinæ citratæ	gr ss		03
	Codeinæ sulph	gr 1/6		25

M Ft capsula No i. Sig One such every two hours

In some instances he recommends the following

℞	Ext cannabis indicæ	gr ss		03
	Camphoræ monobrom	gr i		06

M Ft cap No i Sig One such capsule every two hours

When the pain is sudden in its onset and throbbing in character, ergot combined with codein is recommended

℞	Ext ergotæ	gr i		06
	Codeinæ	gr 1/6		25

M Ft capsula No i Sig One such capsule every two or three hours for two or three doses

Dizziness is not infrequently complained of after the pain has been relieved by the ergot, and may be relieved by applying the galvanic current over the site of the pain

Becker does not omit to mention the fact that the drug treatment of hemicrania is very often disappointing as the effect of the dose wears off, so to speak, and must be increased in size, and while the medicine may afford relief at one time, the same sized dose will prove insufficient a second time

He also warns against the danger of the patient becoming addicted to the use of the coal tar products

PROPHYLAXIS

Patients subject to attacks of hemicrania should guard against undue nervous excitement, and as hemicrania is common to neurasthenics, the proper treatment of neurasthenia should be instituted One of the most common things to be corrected is some error in refraction, especially in children who are frequently troubled with astigmatism, nasal disturbances are less frequently a cause

Gouty conditions and rheumatic diatheses are prominent factors in the etiology of hemicrania at least in adults, and proper treatment should be established to lessen the frequency and severity of the attacks Consequently Becker recommends in such cases colchicum in gouty cases and the salicylates in rheumatic conditions

Anemia, when present, should be treated by administration of iron and the patients should be advised to exercise in the fresh air

TREATMENT OF ATTACKS

If the attack occurs after a hearty meal an emetic dose of the syrup of ipecac should be administered Following emesis he recommends calomel in doses of grain 1/6 each (.25) every half hour for eight doses, followed in two hours by half an ounce (15) of magnesium sulphate in half a glass of warm water An enema of soapsuds and warm water can be given, and small quantities of warm water should be given internally at frequent intervals for from six to twelve hours To relieve the acute pain Davis recommends the following combination

℞	Acetphenetidini	gr v		30
	Salolis			
	Caffeinæ citratæ, āā	gr i		06

M Ft capsula No i Sig One such capsule every two hours for an adult

He also recommends galvanism to the temples and to the back of the neck for 30 minutes daily The elimination from the kidneys should be carefully watched,and in case these organs are acting sluggishly he recommends the administration of potassium citrate in 20 grain doses (1.30) in a glass of distilled water three times a day The diet should be carefully watched and regulated

During the period between the attacks the following combination is advised

℞	Sodii phosphatis	gr xx	1	30
	Salolis	gr x		65
	Tinct nucis vom	m v		30
	Aquæ dest q s ad	f℥iv	120	

M Sig To be taken at one dose in a glass of vichy water, one hour before breakfast, three times a week

To decrease the severity and lengthen the time between the attacks he recommends the following combination

℞	Sodii bromidi	gr xv	1	
	Tinct cannabis ind	gtt x		65
	Syrupi simplicis q s ad	f℈i	4	

M Sig To be taken at one dose

In cases of gouty individuals with high arterial tension he recommends potassium iodid grains 10 (65) three times a day, and in conjunction with it nitroglycerin in moderate size doses

Davis also recommends that in anemia the patient take two hot baths weekly, in addition to the usual medicinal treatment

Randolph, in the same periodical, states that the treatment of the attack is very unsatisfactory and that no drug taken by the mouth can be absorbed during the nausea He states that the best results are obtained by giving calomel in doses of grain ⅛ (008) each every half hour, after vomiting has taken place, and continued until one grain (06) has been taken

Nausea in some of these cases may be relieved by the local application of a mustard plaster The only scientific method, according to Randolph, lies in prophylactic measures

Neuralgia and Headache

L Williams, in the *Clinical Journal* makes a division of the cases which are characterized by pain along the nerve into those in which the condition is a fibrositis, an inflammation of the fibrous tissue of the nerve, and those in which the pain is due to some condition outside of the nerve itself In the sciatic nerve a fibrositis constituting a true sciatica is distinguished by the fact that the pain is aggravated by putting the nerve on the stretch, while if the pain is due to some other cause it may be relieved by this maneuver For the treatment of sciatica, cleansing of the *primæ viæ*, regulation of the diet and especially massage are recommended

The presence of a neuralgia should suggest (1) a fibrositis, (2) an unsatisfactory blood state and (3) the existence of an irritant The blood state may be anemia, goutiness, toxemia from constipation or other cause. Hygiene, generous diet, especially fats, and iron are the remedies for anemia The iron should be given in the form of the citrate or tartrate A useful formula is as follows

℞	Ferri amon citrat	gr x		6
	Liq arsenicalis	m ii		12
	Inf quassiæ	℥ss	15	

M Sig *Ter die post cib*

As strength improves this may be used instead of the above

℞	Ferri et quin citrat	gr xx	1	3
	Liq arsenicalis	m v		3
	Tr nucis vom	m iv		25
	Aquæ aurant flor	f℥ss	15	

M Sig *Ter die post cib*

When giving iron the bowels should be kept open with aloes which enhances the effect of the iron, or later with cascara A daily morning dose of a natural mineral water is also very useful. For a direct influence on the pain a combination of quinin gr v (gm 0.3) and tr gelsemium mx (c c 0 6) is recommended every twenty minutes till [illegible] or four doses are taken

For pain in the area of the trigeminus, whether arising from irritation in the mouth or elsewhere, Williams recommends butyl chloral as one of the best remedies (5 gr every half hour until pain ceases, not exceeding six doses) A combination with gelseminis is desirable Aconite liniment is useful locally For vague pains he has found chlorid of ammonium, gr 20 (gm 1 3), combined with tr cimicifugæ, m 20 (c.c 1 3), more effectual than any of the above mentioned remedies

Williams regards acetanilid as our most valuable and powerful antineuralgic, next to morphin, and thinks that it is not more dangerous when cautiously used than many other drugs which are habitually prescribed According to him the occurrence of slight cyanosis need not be alarming [Caution in the presence of such symptoms is, however, the part of wisdom—ED] Morphin sometimes is very useful, but not often desirable. Leeches have often a marked effect

Neuralgia and headache connected with eyestrain are characterized by the fact that they appear as the result of slight defects so that patients will declare that their eyesight is exceptionally good This good eyesight is made possible, however, by continual contraction of the ciliary muscle, which leads to exhaustion and neuralgia as a consequence Dizziness, nausea and vomiting and general nervous exhaustion may be secondary effects Careful examination should be made and errors corrected Dental irritation may also give rise to headache The same is true of nasal and aural affections In migraine careful search should be made for eye strain and other local lesions, and the physician should also search for cardiovascular changes If nothing can be discovered, the general nervous sensibility should be reduced by hygiene, diet and the exhibition of bromids

Headaches caused by mechanical congestion (tight corsets, collars, obstructions in the nose and pharynx) are obviously to be treated by the removal of the obstruction Headache may be due to change of climate When the conditions are relaxing quinin and strychnin are efficient. Headache accompanying a cold is usually due to a fibrositis and is to be treated accordingly Most headaches are due to blood states, such as anemia, toxemia from poisons of specific diseases, alcohol, defective kidney excretion, constipation As a general rule, not to be too much insisted on, headaches due to toxemia are frontal, while those due to functional nervous troubles have a preference for the vertex While the salts of potassium are useful diuretics, theobromin or its compound diuretin is the best It is best given in cachets of 15 to 20 grains three times a day Where there is reason to suppose that headache is due to vasomotor constriction, liq trinitrin is very useful Its effect, however, is transitory, and it should not be frequently repeated Dr Williams thinks that it is best given in conjunction with hydrobromic acid, and he advises the following large dosage

℞	Liq trinitrin	m iv	|25
	Acid hydrobrom dil	m xx	1|3
	Aquæ	f℥ss	15|

M Sig *Ter die post cib*

Cannabis indica is useful for the symptomatic treatment of headache Ross has described a headache which is associated with deficient coagulability of the blood, and yields readily to chlorid of a calcium In very persistent headaches it is well to blister the nape of the neck and keep the wound open with savin ointment for a week This sometimes succeeds where other measures fail.

Medicolegal

Competency of Witnesses to Testify to Poisoning

The Court of Criminal Appeals of Texas says, in Rice vs State, that it does not believe it required a woman to be an expert in order to be able to know that poison was administered to her through a syringe into her rectum It was the statement of a fact which, without any personal experience or any expert knowledge, she might state Again it says that two physicians were permitted to give their opinion as to the cause of the subsequent death of the woman in question and both attributed it to strychnin poison Both of them testified that they had never before come in contact with a case of strychnin poison in their practices, though both were graduates of schools of medicine and had practiced medicine a number of years, that all of their knowledge as to strychnin poison was such as had been acquired from reading the books and study, and from what they had been taught in school. This was objected to on the ground that it was hearsay and incompetent, that said witnesses could not be considered as experts But the court holds that the testimony was admissible Nor, in its opinion, does this militate against the proposition that medical works can not be read to the jury either as evidence or as argument A man, it says, may become an expert from his knowledge of the human system and from his knowledge of strychnin as a poison, without having ever attended a case of poison by strychnin A man may become an expert from scientific investigation without any practical experience

No Damages for Anguish from Mutilation of the Dead—Property Rights in Bodies and Skeletons

The Supreme Court of Oklahoma holds, in Long vs Chicago, Rock Island & Pacific Railway Company, that the parents of an infant child are not entitled, under the law, to recover damages for mental pain and anguish occasioned by the mutilation of the dead body of such infant. It says that in announcing this rule it has not overlooked the declarations to the contrary by some courts of high standing These decisions, however, indicate an effort to interpolate into the law for the punishment of a wrong a remedy at the sacrifice of legal principles The courts which declare the right to recover for mental anguish in a case of this character do so on the assumption that a human corpse is property, not property in the general acceptation of that term, but a sort of quasi (as it were) property—that is, that it so resembles property, in the right of relatives to control and direct its interment, and to have it kept inviolate from negligent or malicious injury, that the law of the rights of property and the remedy for the destruction thereof should be extended to such cases, measuring the injury and the compensation by the mental suffering of the living occasioned by the desecration of the dead The disposition to protect the bodies of the departed, as indicated by these decisions, appeals to our higher sensibilities, but the rules announced by these courts authorizing recovery for mental anguish alone is, in this court's opinion, largely the result of sentiment, and is in conflict with the common law of the land It is true that in some countries the bodies of deceased persons have been seized and sold for debt, and, under such a law, they would be property Greatly to their credit, England and the United States have always considered the decent burial of the dead of more importance than the payment of the debtor's claim In dealing with the question presented the court has no reference to dead bodies or the skeletons thereof which have been by law properly appropriated for the benefit of science, as, for instance, for medical schools and other institutions of learning That such are property this court does not deny, because they have an intrinsic value for a particular purpose Nor is this court inclined to criticise, as some other courts have done, the failure of the lawmaking power to provide for recovery in such a case as here under consideration The legislature are the judges of the expediency of such a law, and on that question minds might differ, for the legal wrong is against the public and not against the individual But where a corpse is mutilated, before or after burial, in such a way as to render necessary the expenditure of extra money or labor in caring for it, or where injury is done to the coffin or clothes, the actual damages sustained may be recovered

Capacity of Children to Commit Rape and Other Crimes

The Supreme Court of North Dakota says, in the case of State vs Fisk, that the confusion which existed at common law as to the capacity of children to commit crime has been removed in that state by express statute Section 8544 of the Revised Codes of 1905, so far as material, provides "All persons are capable of committing crime except those belonging to the following classes 1, Children under the age of 7 years, 2, children over the age of 7 years, but under the age of 14 years, in the absence of clear proof that at the time of committing the act or neglect charged against them they knew its wrongfulness" Under this section a child under the age of 7 years is conclusively presumed to be incapable of committing a crime In this respect it is the same as the common law, both of England and this country Between 7 and 14, called the dubious age of discretion, the child is still presumed to be incapable, but the presumption is not conclusive The state may overcome the presumption, but to do so it must show by clear proof that the accused knew the wrongfulness of the act when he committed it In the absence of such proof the presumption of incapacity must prevail The burden is on the state in such cases to prove knowledge of the wrongfulness of the act as an independent fact In this respect the rule is the same as at common law

The foregoing may be said to refer to mental capacity But the crime of rape, as well as the crime of assault with intent to commit rape involves a further element, and that is the physical capacity to commit the offense In England it was accepted as a fact that a child under 14 had not the physical capacity to commit the offense, and it was, therefore, held from an early day that the presumption of incapacity was conclusive Evidence to show capacity was not admissible In this country several states followed the English common law rule Williams vs State, 20 Fla 777, McKinny vs State, 29 Fla 565, State vs Sam Wrist, 60 N C 294, State vs. Pugh, 52 N C 61, Foster vs Com (Va.), 31 S E Rep 503, State vs Handy, 4 Har (Del) 566 See also Com vs Green, 2 Pick (Mass) 380 The courts of other states, and with considerable unanimity, were of opinion that the English rule was not suited to this country on account of the difference in condition, the age of puberty apparently coming earlier, and held that the presumption of physical capacity was not conclusive, but that it may be overcome by proof that the defendant has reached the age of puberty and was capable of consummating the crime People vs Randolph (N Y), 2 Parker Cr R. 174, Williams vs State, 14 Ohio, 222 Hiltabiddle vs State, 35 Ohio St 52, Gordon vs State, 93 Ga 531, Wagoner vs State, 5 Lea (Tenn), 352, Heilman vs Com , 84 Ky 457, State vs Jones, 35 La Ann 935

The law in this state (North Dakota) is settled by statute in favor of the rule laid down in the cases just cited Section 8891 of the Revised Codes of 1905 reads "No conviction for rape can be had against any one who was under the age of 14 years at the time of the act alleged, unless his physical ability to accomplish penetration is proved as an independent fact, and beyond reasonable doubt" In prosecution of persons between the ages of 7 and 14, for rape or an attempt to commit rape, the burden is on the state to show the mental and physical competency of the defendant In the absence of such proof the presumption of incompetency must prevail

As applied to assaults with intent to commit rape by children between 7 and 14 years of age, the rule is that where physical capacity to consummate the offense is not shown, there can be no conviction for an assault with intent to commit it There being no ability to commit the rape, the intent is merely a thought or desire, which could not in the nature of things produce any result, the highest offense of which the party is capable being a mere assault and battery The only case holding a contrary view which has come to this court's notice is Com vs Green, 2 Pick (Mass), 380, in which it is held that the want of physical ability to consummate the offense will not defeat a conviction for an assault with intent to commit it.

In the case of an adult, impotency is a defense against the consummated offense of rape But the courts differ when the charge is an attempt See Territory vs Keyes 5 Dak 244 In that case it was held that the impotency of a grown man is no defense in a prosecution for assault with intent to commit rape, in the absence of proof that the defendant knew that he was impotent. In the present case, a prosecution of a boy under 14 years of age, there was legal incompetency The question of impotency was not involved

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York.

October 6

1 *Three Ureters Demonstrated During Life Ureter Catheterization Giving Three Different Urines, One Infected with Gonococci B Lewis St. Louis
2 *Axioms in the Treatment of Cancer of the Rectum. C. B Kelsey New York.
3 Treatment of Symptoms a Rational and Scientific Procedure G F Butler Chicago
4 *Effect of Blowing on Wind Musical Instruments with Special Reference to Tuberculosis J F Rogers, New Haven Conn
5 *Appendicitis J J Brownson, Dubuque Iowa.

1 **Three Ureters Demonstrated During Life**—Lewis gives the history of this patient, a man, 24 years old Even after the most careful and persistent treatment, the condition of urethral gonorrhea proved very rebellious During the writer's examinations it was noted that, as a rule, the organisms were not so numerous in either the urethral discharge or that pressed from the prostate as they were in the sedimentations from the urine On inserting the rectangular cystoscope into the bladder two ureter openings were observed to the left of the median line The normal opening was seen on the right side The ureters were identified by passing up into them ureter catheters filled with lead fuse wire An *x* ray photograph was then taken Only one of the two left sided ureters was infected

2 **Axioms in Treatment of Cancer of Rectum**—Kelsey believes that in every suitable case of cancer of the rectum the patient should be subjected to immediate excision or resection by some one of the half dozen well recognized varieties of the operation In every other case, he considers such only as allow of complete removal of the disease with no more risk than attends any other major surgical operation The mortality rate depends on the choice of cases and on the operator There is no one operation that is applicable to all cases The site of the growth must be the controlling factor Kelsey describes the method which he has found satisfactory

4 **Effect of Blowing on Wind Musical Instruments**—Rogers states that the outflow of lymph is hastened, especially from the lung tissue, the heart sounds and beats are not materially altered except by extreme pressure, the gaseous interchange in the lungs must be facilitated at least temporarily, the effects of changes of pressure on the circulation and movements of the abdominal organs are pronounced, the amount of muscular strength required varies with the instrument and character of performance Opinion among musicians seems to be about equally divided as to the frequency of tuberculosis among such musicians The professional musician who has contracted tuberculosis would better adopt some less taxing work when the quality or quantity of his work makes too much demand on his general vitality, and when his surroundings as to ventilation or dust are bad, he should find a place entailing less danger

5 **Appendicitis.**—Brownson says that the operation for appendicitis ought to be done in the primary stage or before the high fever period The appendix should be removed, to guard against fulminating cases and those in which rupture occurs into the abdominal cavity In the secondary period, after suppuration, drainage should be instituted and Nature left to take care of the appendix. In the interval, after all symptoms of inflammation have subsided, the appendix should be removed The operation ought not to be done in the intermediary period when there is fever and distension of the abdomen, because the danger from operation at this period is greater than the risk of the case becoming fulminating, or the abscess bursting into the abdominal cavity

New York Medical Journal

October 6

6 *Functions of the Cerebellum and Symptoms of Its Disease C. L. Dana, New York.
7 Progressive Muscular Atrophy of Cervicobulbar Type Occurring with Cervical Rib W G Spiller and J C. [illegible] Philadelphia.

8 *A Practical View of Tent Life in the Southwest. D E Elliott E. Las Vegas N M
9 *Note on Peculiar Attitudes in Epilepsy During Sleep N B Roos Binghamton N Y
10 *Supracondyloid Fracture of the Humerus C C Page New York
11 *Differential Diagnosis of the Acute Infectious Diseases F H Dillingham New York.
12 Relations of Gastric Ulcer to Gastric Cancer M R Barker, Chicago

6 **Functions of Cerebellum.**—Dana calls attention to the general subject of the functions of the cerebellum, and then to the morbid phenomena caused especially by other conditions and tumors such as hemorrhages, softenings, degenerative sclerotic and functional disturbances He reports 6 illustrative cases

8 **Tent Life in the Southwest**—Elliott says that the South west with its pure, dry, warm air and tent life can do good to all tuberculous patients, can do much for many, and can work wonders for a few but that to get the greatest benefits in the shortest time the patient must be placed right at the start and be told what to do and what not to do at all times

9 **Attitudes in Epilepsy During Sleep**—In the men's infirm ary at the Craig Colony, Ross has observed a peculiar simi larity *of posture during sleep in a large number of the male* patients Many of them sleep curled up, the head being bent forward until it rests securely on the knees, which are drawn up Many of these low grade patients invariably cover their heads entirely with blankets Others sleep in a sitting posture night after night the year round, while still others simply brace the head against the pillow as it stands on edge at the head of the bed Others sleep flat on the abdomen, while still others sleep with their arms above the head, the fingers clasped and supporting the head in this manner Some sleep with their heads resting on elbows and hands, while others sleep in a *posture in which the head is flexed until it touches the breast,* without giving any support whatever to the head Ross thinks this observation is interesting chiefly from the fact that all patients who assume these extraordinary attitudes during sleep have practically no mentality, standing but little any above animals in this respect

10 **Supracondyloid Fracture of the Humerus**—Page reports case which illustrates the excellent results obtained by the rompt reduction and accurate replacement of the fragments i a supracondyloid fracture of the left humerus

11 **Diagnosis of Acute Infectious Diseases.**—In this paper illingham considers particularly the diagnosis of the less ypical cases of smallpox, chickenpox, measles, scarlet fever nd typhoid fever

Boston Medical and Surgical Journal.

October 4

13 *Future of the Medical Profession C. W Eliot Boston
14 *Unity of the Medical Sciences W H Welch, Baltimore
15 *Hysteria from the Point of View of Dissociated Personality (To be continued) M Prince Boston
16 **The Ulnar Nerve as a Landmark of the Elbow* F J Cotton Boston

13, 14—See THE JOURNAL, Oct 6, 1906 page 1115

15 **Hysteria**—Prince presents a study of certain well known types of hysteria from the point of view of dissociated or dis integrated personality and, conversely, dissociated personality from the point *of view of hysteria, taking into consideration* only such manifestations as may be observed by the clinician, *without consideration* of the psycopathologic changes which underly hysteria and multiple personality The article is to be continued.

16 **Ulnar Nerve as Landmark**—Clinical experience has con vinced *Cotton that the ulnar nerve serves admirably* as a land mark of the elbow Particularly it is of value in the common and often overlooked fractures or epiphyseal separations of the internal epicondyle. It is very rarely that the ulnar nerve is displaced

St. Louis Medical Review

September 29

17 Mouth Cleanliness. M A Smale London, England.
18 Origin and Heredity of Matter J Wright, New York

The Laryngoscope, St Louis, Mo

September

19 *Herpes Zoster Auris. D T Vail Cincinnati
20 *A New Operation for Extreme Cases of Septal Deflection with Presentation of a Successful Result in an Adult Case J Price-Brown Toronto
21 Blood Clot Method of Wound Repair in Aural Surgery F B Sprague Providence, R I
22 *Infective Sigmoid Sinus Thrombosis Resection of Internal Jugular H B Ellis. Los Angeles.
23 **Mixed Tumor of the Soft Palate* T H Halsted Syra cuse N Y
24 *Case of Polypoid Lipoma of the Tongue A O Pfingst, Louis ville Ky
25 Faucial Pillar Retractors A. R Solenberger, Colorado Springs Colo
26 Case of Epileptiform Hysteria Probable Result of Necrosing Ethmoiditis. W W Bulette Pueblo Colo
27 *Case of Submucous Hemorrhage of the Right Vocal Cords. O Wilkinson Washington D C
28 *Perforation of the Septum Naris. C W Richardson, Wash ington D C.
29 *Frontonasal Encephalocele F E Hopkins, Springfiel Mass
30 Removal of An Open Safety Pin from the Esophagus F L Stillman Columbus, Ohio
31 Two Cases of Bone Impacted in the Larynx J M Inger *soll and D P Allen, Cleveland Ohio*
32 Papilloma of Larynx from Inhalation of Flames. A B Thrasher Cincinnati
33 A Rare Form of Tubercular Laryngitis Tubercular Web Be tween the Vocal Cords. S Rosenheim Baltimore

19—See abstract in THE JOURNAL, July 28, 1906, page 299

20 Id.—Oct 6, 1906, page 1137

22 Id—July 21, 1906, page 230

23 **Mixed Tumor of Soft Palate**—Halsted reports the case of a man, aged 55, who had a swelling in the throat for at least 20 years Various diagnoses had been made by the phy sicians consulted and the majority advised removal, although a few of them strenuously advised against any surgical inter ference Following an acute attack of pharyngitis and laryn gitis, the patient submitted to having the tumor removed It was encapsulated, as hard as a bone, but in its center were several small cystic cavities On microscopic examination the tumor was found to be a typical example of the mixed tumors *of the salivary glands,* the so called cylindromata Seven months after the operation the tumor had not returned

24 **Polypoid Lipoma of Tongue**—The patient concerned in the report made by Pfingst was a girl, aged 14½ Attached to the tongue at a point corresponding to the foramen cecum was a large pedunculated mass of a shape which could be compared to a fetal chicken or duck It had a smooth though slightly irregular surface, was pink in color, and rather firm to the touch The tumor was first noticed when the patient was about two weeks old The growth was removed by snaring it close to the base with a Peters snare Hemorrhage, though profuse for two or three minutes, subsided in ten minutes and the patient made a good recovery The mass of the growth was made of true adipose tissue, with rather large cells ir regularly arranged, and was characterized by an abundance of thin walled vessels

27 **Submucous Hemorrhage of Right Vocal Cord.**—The spe cial feature in the case reported by Wilkinson is that the hemorrhage came on *in a perfectly healthy woman, aged 50,* without any apparent exciting cause The treatment con sisted of mild oil sprays at first, with one or two applications of 2 per cent nitrate of silver solution, and an injunction not to use the voice

28 **Perforation of Nasal Septum.**—Richardson reports 15 additional cases of perforation of the nasal septum in which there was no known etiologic factor and an indefinite patho logic history An analysis of these 15 cases showed that in *11 there was either the direct physical evidence of tuberculosis* in the affected individual, or that the perforation took place in an individual who it might be said, had a well marked family history of tuberculosis These 15 cases, added to the 17 reported in a previous paper, make 32 cases with a total of 22 cases in which tuberculosis was more or less in evidence, with 10 without such evidence Richardson believes that this occurrence of *66 per cent of perforation in individuals of a* tuberculous or tubercular predisposition must be more than a mere pathologic coincidence

29 **Fronto Nasal Encephalocele**—The case reported by Hop kins differs from cases reported previously in that the symp toms were almost wholly nasal The patient was 11 months

old and presented a small swelling over the right nasal bone, which was present at birth and had been diagnosed as a cyst Relief was sought because of obstruction to nasal respiration in the right fossa On examination the right fossa was found to be occluded by a tumor projecting in the vestibule having its attachment apparently to the outer wall near the anterior end of the inferior turbinate The small mass was removed with a cold wire snare and the supposed pedicle trimmed down smoothly with a pair of cutting forceps Examination of the deeper parts of the fossa by reflected sunlight revealed a globular tumor at the level of the middle turbinate about five eighths of an inch in diameter, perfectly smooth, of a grayish color and semi translucent Pressure made with a cotton tipped probe against the globular tumor within the nose caused an increase in size of the external one, while pressure with the finger externally was conveyed to the mass within Diagnosis of cerebral hernia was made, and as no operation promised relief nothing further was done The child became ill on the fifth day, and at the end of two weeks died of meningitis

Annals of Surgery, Philadelphia
September

34 Serumtherapy of Tetanus N Jacobson Syracuse, N Y and H D Pease Albany N Y
35 *Treatment of Tetanus by Magnesium Sulphate J A Blake New York.
36 Early Operation in Traumatic Intracranial Hemorrhage F W Murray New York
37 *Case of Tumor of the Carotid Body J C Da Costa Philadelphia.
38 *Shortening of the Round Ligaments of Subperitoneal Ventro-Aponeurotic Fixation J M Fisher Philadelphia
39 *An Experimental Study of Suture of Arteries with a Description of a New Suture G M. Dorrance Philadelphia
40 *Combined Superior Tibio fibular and Astragalo-fibular Osteoplasty as a Means to Prevent Shortening of the Leg After Extensive Osteomyelitis of the Tibia Occurring During Adolescence. N Kerr Chicago
41 *Relation of the Technic of Nurses and of Hospital Apparatus to the Healing of Wounds C P Noble, Philadelphia

35 —See abstract in The Journal, July 14, 1906, page 146

37 **Tumor of Carotid Body**—Da Costa reports a case in which removal of the tumor was followed by hemiplegia He points out that the operation of removing a carotid tumor is an extremely dangerous one and is not to be undertaken lightly Every tumor in this region of the neck should be examined very carefully so that the surgeon will not be led into operating for some supposedly trivial condition and then find himself suddenly so far advanced in attacking a carotid tumor as to necessitate tying all the carotids In his case, eight weeks after the operation, the hemiplegia seemed to be fading [This case was referred to in the article on this subject by Drs Keen and Funke, in The Journal A M A, Aug 18 25, 1906 —Ed]

38 **Shortening of Round Ligaments.**—The operation to which Fisher refers is the one devised by Dr E E Montgomery

39 **Sutures of Arteries.**—In the method described by Dorrance attention is called to the following advantages 1, The suture does not protrude in the lumen of the artery, 2, fibrin ferment can not get from the ends or cut surfaces of the artery into the blood stream, 3, the liability to secondary hemorrhage is lessened by the double line of suture Disadvantages have not been observed Pagenstecher's thread No 1 is used in the finest sewing needle the thread will pass through The clamps used are very limber bladed forceps, devised especially for this work in order to avoid crushing the intima The blades are covered with rubber tubing Dissecting forceps are used to hold the edges of the artery The suture can be used for a longitudinal, oblique or transverse (complete or incomplete) cut in the artery When suturing a longitudinal cut the clamps are applied 2.5 cm above and below the cut The suture is started 1 5 mm above the cut edge, the suture is passed through the outer two coats and tied the end of the suture is grasped by a hemostat the needle is next passed through all the coats of the artery on both sides 1 5 mm below the first suture and 1 5 mm from the cut edge the suture from now on is a continuous mattress suture with the dropping back one half a suture length every third suture until the end of the incision is reached then the suture is passed through the outer two coats 1 5 mm below the lower end of the cut and a half hitch made to tie the suture The same suture is continued as a whip stitch over the edges of the artery outside of the mattress suture until the starting point is reached, when the two ends of the suture are tied The artery is grasped in a gauze pad, the distal clamp removed, then the proximal clamp and the artery is dropped back in place and the deep fascia sutured around the line of approximation The method of suturing an oblique cut is practically the same as for the longitudinal

40 **Osteoplasty**—The principal point in the case reported by Kerr, and the one which he believes to be of value in properly selected cases, is the substitution of the fibula for the tibia as the pressure bearing bone, in order that continued growth in the length of the leg may be maintained Kerr concludes that the periosteum can be relied on to regenerate new bone, that it is not necessary to wait for two or two and a half months for evidences of repair on the part of this membrane, and that it is even better to remove the shaft of the tibia entirely just as soon as one feels satisfied that the vitality of the involved bone is sacrificed, that on account of the difficulties of rendering the parts sufficiently aseptic, through and through drainage either with gauze or tubes should be instituted just preliminary to the suturing of the edges of the periosteum together

41 **Sources of Wound Infection.**—The points to which Noble directs attention are 1 Whether surgeons should be satisfied with the policy of giving verbal directions to head nurses about the disinfection of hospital apparatus and the technic of nurses as applied to the treatment of wounds, or, whether each hospital should adopt a routine technic which should prescribe the methods which are to be followed, thus avoiding any possibility of error on the part of the head nurse and pupil nurses 2 The importance of preventing the infection of the hands of nurses by the elimination of all possible sources of contamination, through proper regulations as to the cleansing and disinfection of wards, rooms furniture and apparatus employed by the nurses 3 The adoption of a proper technic for the disinfection of nurses' hands 4 The installation of proper sterilizers, which will enable nurses to sterilize the apparatus used by them as efficiently as is done in operating rooms at the present time.

Virginia Medical Semi-Monthly, Richmond
September 21

42 *Two Cases Illustrating the Value of the Ophthalmoscope as an Aid in the Diagnosis of the Cause of Brain Lesions J Dunn Richmond.
43 Gonorrhea R. A Gamble Petersburg Va
44 *The Lingual Tonsil J P Davidson Richmond
45 Tuberculosis—Its Etiology—Prophylaxis and Treatment. G Armstrong Staunton Va
46 Cough in Consumption and Its Management. W H Coffman Asheville N C

42 **Value of Ophthalmoscope in Diagnosis of Brain Lesions**—The two cases reported by Dunn are, one of isolated supranuclear paralysis of the seventh nerve, and one of left sided hemianopsia Both patients sought relief from what they supposed was some eye trouble Ophthalmoscopic examination disclosed the real condition

44 **Lingual Tonsil.**—Davidson believes that the lingual tonsil often is responsible for persistent hacking or spasmodic cough and that these symptoms can be relieved promptly by local applications to the tonsil rather than by the administration of sedative cough mixtures

Journal of the Minnesota State Medical Association and the Northwestern Lancet, Minneapolis
September 1

47 The Lymphatics in Appendicitis F P Quain Bismarck N D
48 *Skin grafting Modified Open Method W D Kelly St. Paul
49 *Tuberculosis. H M Bracken St Paul
50 Anaërobic Cellulitis or Infectious Emphysema J W Little Minneapolis.

48 **Skin Grafting**—Kelly employs local anesthesia and prepares the skin by washing it with sterile water or normal saline solution A double edged spatula knife is used to take grafts by following a flat piece of board upward toward the imbedded hook with a sawing motion In this way a very wide and as long a graft as required can be made The skin graft should be made as thin as possible The graft is placed

on a flat holder and immediately placed on the granulating surface If the open wound is of recent date and granulating surfaces appear healthy, even if a discharge be present, it will be unnecessary to curette or to disturb the wound in any way, except to wash it carefully with normal salt solution or sterile water If, however, the granulations are spongy, soft, or pale it is well to use a blunt curette to freshen up the surfaces of the wound All bleeding should be stopped, and the blood clot removed before grafts are applied. In placing the grafts they should be smoothed out on a spatula or flat spoon, and applied with the follicles and the hair running in the same direction as the hairs of the parts around the wound The spaces under the graft, when applied, should be obliterated, and the grafts made to agglutinate closely to the granular surface, which may be accomplished by using a rolled piece of gauze After application of the graft this gauze is rolled on the graft, either upward or downward, until the graft gives an appearance of translucency, and the appearance of sticking or drawing in closely to the bottom of the wound The dressings used on portions of body other than limbs are usually a thick piece of sterile gauze, placed on either side of the wound and held in place by strips of oxid of zinc plaster, which plaster is held far above the wound by the gauze A single strip of gauze is placed over the entire wound, over the above dressing, and held in place by two oxid of zinc straps In this way the patient or any one else is prevented from infecting the grafted side The modified open dressing is usually completed by a single strip of gauze over the entire dressing This dressing usually remains in place for four or five days, and if, at the expiration of this time, it is necessary to remove it, this can be done by cutting the dressing at right angles The wound can then be dressed, and if blebs are formed they should be incised with either scalpel or scissors and simply washed with a disinfectant solution, but not irrigated

49 **Tuberculosis**—Bracken sums up the important points in the control of tuberculosis as follows 1 An early diagnosis of the disease In this the responsibility is about equally divided between the patient and the physician 2 The education of the people, in order that they may know that tuberculosis is both a preventable and a curable disease 3 The recognition of the fact that the general practitioner and the sanitary authorities must work together in the care of those cases which have become centers of infection, viz., cases with the tubercle bacillus present in the sputum 4 The necessity for the proper care of tuberculous patients either at their homes or in sanatoria, in order to prevent the infection of others 5 The necessity of considering the protection of the uninfected as an important factor in the control of tuberculosis 6 The even greater necessity of caring for advanced or incurable cases than for the mild curable cases, if the disease is to be brought under control 7 The creation of conditions to meet all requirements in the care of the tuberculous embracing sanatoria, district nursing, dispensaries, etc. 8 The formation of antituberculosis organizations, to take an interest in raising funds and in aiding in providing for the proper care of the tuberculous 9 The recognition of the fact that medication is but a small factor in the control of tuberculosis, while good hygienic surroundings for the patient together with the proper prophylactic measure for the uninfected, are of the greatest importance in the control of this disease

Fort Wayne Medical Journal-Magazine

September

51 Etiology Transmission and Diagnosis of Scarlet Fever E M Van Buskirk Ft. Wayne
52 *Gonorrheal Lesions Other Than of the Genital Tract A. Kane, Ft. Wayne

52 **Gonorrheal Lesions**—Kane discusses the gonorrheal affections of the endocardium and of joints, but offers nothing new

The Postgraduate, New York.

September

53 Presentations of Specimens S S Graber New York.
54 Vincent s Bacillus and Spirillum the Causal Agent of Chronic Suppurative Otitis Media Necessitating Radical Operation—Meningitis—Death R J Held, New York.
55 Nauheim Bath in Gynecology S W Bandler New York.

Louisville Monthly Journal of Medicine and Surgery

September

56 Neuroses of the Intestine. J Glahn Owensboro
57 Treatment of Doctors A. F Knox Bowen
58 Items of Interest. E S McKee Cincinnati Ohio
59 Acute Autointoxication from Fecal Stasis. W F Waugh, Chicago
60 Case of Hydrophobia. I A. Arnold Meadow Lawn
61 Treatment of Chorea. R B Gilbert, Louisville.
62 Seminal Vesiculitis. J T Windel, Louisville
63 Phases of Surgical Shock. T L. Butler Louisville

Journal of the Kansas Medical Society, Lawrence

September

64 Absurd Verdicts in Cases of Insanity—Unfitness of Jury System B D Eastman Topeka.
65 Plea for the Earlier Diagnosis and Treatment of Epilepsy M. L Perry Parsons.
66 Dementia Præcox T C Biddle Topeka
67 Paranoia L. L. Uhls Osawatomie.
68 Toxic Psychoses C C Goddard Leavenworth

Journal of the Arkansas Medical Society, Little Rock.

September 15

69 Cases of Version M G Thompson Hot Springs
70 Hemorrhage from Uterus During Gestation J T Clegg Siloam Springs

Medical Examiner and Practitioner, New York

September

71 Early Diagnosis and Prognosis of Pulmonary Tuberculosis. S A. Knopf New York.
72 The Vagus Reflex a Diagnostic and Prognostic Sign in Life Insurance Work T J Mays, Philadelphia.
73 Features of Chest Examination of Interest to Life Insurance Examiners J M Patton, Chicago
74 Tuberculosis Its Consideration in Relation to Risks in Life Insurance. W M Hilton Waverly, N Y

Vermont Medical Monthly, Burlington.

September 15

75 Primary Pernicious Anemia C H Beecher Burlington
76 Angina Pectoris A. C Bailey Randolph
77 Jaundice M. L. Chandler, Barre

Medical Fortnightly, St Louis

September 25

78 Internal and External Urethrotomies. R Harrison London England
79 Our Duty to Prospective Medical Students A L. Benedict Buffalo

The Therapeutic Gazette, Detroit, Mich

September 15

80 The Diet of Childhood D J M Miller Philadelphia
81 Results of Treatment in Ninety Four Cases of Pulmonary Tuberculosis F M Pottenger Monrovia, Cal
82 Progress in Serumtherapy During the Year Ending June 1 1906 E R. Larned Chicago
83 Report of the Management of Tuberculous Patients Applying for Treatment to the Dispensary of the Samaritan Hospital Philadelphia M R Taylor Philadelphia.
84 Present Status of Operative Intervention in Exstrophy of the Bladder A. P M Vance Louisville, Ky

Brooklyn Medical Journal

September

85 Honors That Have Come to the Medical Profession in America W Schroeder Long Island
86 Nasal Malformations and Diseases of the Nasal Accessory Sinuses. C W Stickle Brooklyn
87 Address to the Graduating Class of the Methodist Episcopal Training School for Nurses May 31 1906 W F Campbell Brooklyn

Southern California Practitioner, Los Angeles

September

88 The Physician s Duty to His Fellow Practitioner W Lindley Los Angeles.
89 European Surgery A. S Lobingier Los Angeles.
90 Electrical Apparatus and Therapy A Solland Los Angeles
91 Extrauterine Pregnancy M A Rodgers Tucson Ariz
92 Our Duties as Citizens in the Prevention of Tuberculosis. G H Kress Los Angeles

St. Paul Medical Journal.

October

93 Dermatitis Exfoliativa B Foster St. Paul
94 Homicide by Aconite Poisoning and the Quantitative Distribution of Aconitina in the Human Body 317 and 385 Days After Death H C Carel Minneapolis.
95 Pyelitis. H Peddicord St. Paul
96 Etiology and Pathology of Acute Septic Osteomyelitis W A Dennis St. Paul.

Journal of the Medical Society of New Jersey, Orange

October

97 Metastatic Panophthalmitis C. J Kipp Newark
98 Results of Dr Allport s Plan of Examination of the Eyes and Ears of Public School Children in the Oranges L. Emerson Orange.
99 Edema of the Larynx Two Cases Associated with Acute Septic Disease of the Throat F C Ard Plainfield.
100 Tendency of the Organism to Limit Pulmonary Tuberculosis. T Senseman Atlantic City

Mississippi Medical Monthly, Vicksburg

October

101 Advantage of an Early Operation in Appendicitis H T Inge Mobile. Ala
102 Biliousness. H H West, Biloxi
103 La Grippe. J T Longino Jonestown

California State Journal of Medicine, San Francisco

August

104 Gastroenteric Autointoxication Its Recognition and Significance and Its Relation to Arterial Hypertension W A Briggs Sacramento
105 Pain E. R Wagner San Jose.
106 True Sciatica and Diseases of the Posterior Urethra and Adnexa G S Peterkin Seattle Wash
107 Choice of Anesthesia. H L. Parish, Calistoga
108 Local Anesthesia T C Edwards, Salinas.
109 Conservative Treatment of Hip Disease. S J Hunkin San Francisco

Journal of the South Carolina Medical Association, Greenville

September 21

110 Unjustifiable Hysterectomy M Simons Charleston
111 Recent Meeting of the British Medical Association in Toronto, Ontario W P Porcher Charleston.
112 Intestinal Origin of Tuberculosis of the Tracheobronchial Glands. A. Calmette C Guerin, and A. Delearde Charleston
113 Our Medical Law M R. Baker Columbia
114 The County Medical Society and Its Benefits to the Medical Profession O B Mayer, Newberry

Journal of the Outdoor Life, Saranac Lake, N Y

October

115 The Error of Climate in the Treatment of Tuberculosis. J W Kime, Ft. Dodge, Iowa.
116 The Barlow Sanatorium of Los Angeles, Cal G H Kress, Los Angeles.
117 Winter Amusements in Arizona. H. H Stone, Phoenix Ariz

Kentucky Medical Journal, Louisville

October

118 Intussusception J B Bullitt, Louisville.
119 Ectopic Pregnancy A. W Cain, Somerset.
120 Advantages and Disadvantages of Being a Physician J E Wells Cynthiana
121 Postoperative Intestinal Obstruction Consequent on Visceral Stab Wounds of Abdomen R. C Falconer Lexington.

The Canada Lancet, Toronto

October

122 Thoughts on a Decade in Medicine E A. Reeve, Toronto
123 *Circulation Viewed from the Periphery J Barr, Liverpool England
124 *Technic of Operations on the Central Nervous System V Horsley London England
125 Meeting of the British Medical Association in Toronto August 21 25 1906 J Hunter Toronto
126 Application of Physical Chemistry to Serum Pathology W H Manwaring Toronto

123, 124 See abstracts in The Journal, Sept 1, 1906, page 706

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

September 22.

1 Protection and Control of the Milk Supply R. Harcourt
2 Sanitary Control of the Milk Supply J Glaister
3 Protection and Control of Milk Supplies. H C Pattin.
4 Hygiene of the Home. J J Cassidy
5 Medical Inspection of Children Attending Elementary Schools H MacMurchy
6 Medical Inspection of Schools. W Scott.
7 Present Status of Antituberculosis Work in Canada. J H Elliott.
8 *Significance of Some Enlargements of the Thyroid Gland. A. F Martin
9 *Simulation of Mastoid Disease S Paget.

8 **Significance of Enlargement of Thyroid.**—Martin attempts to explain the occurrence of some simple enlargements of the thyroid gland to which he gives the name thyreocele, a term first used by Robinson Based on a careful study of a large number of cases, Martin concludes that a call for increased functional activity is sufficient cause for simple enlargement of the thyroid gland Such a call is frequently given by the metabolism of the organism in connection with growth and development, with a performance of the uterine functions in the female, and with the chlorotic conditions of young girls The phases of enlargement of the thyroid included under the term thyreocele are a response to such an appeal from one or more of the above causes in an individual which thyroid function is performed feebly As undue physiologic activity is a potent cause for pathologic change, so this simple hypertrophy, when necessitated for prolonged periods, lays the foundation of the pathogenesis of the degenerate cystic and an adenomatous bronchocele There is often some influence exerted by heredity on the thyroid function

9 **Simulation of Mastoid Disease**—In two cases seen by Paget, the signs of acute mastoid inflammation were feigned The patient in each case was a nurse One patient, a nurse in a fever hospital, had been subject for some months to a very slight discharge from the left ear She complained of pain behind the ear A few weeks later the temperature began to rise every evening, and at the end of a week it was 103 The patient was admitted to the hospital with a view to operation, but on taking the temperature it was found to be normal in the mouth and 104 under the arms After a week or ten days the temperature became steady, the patient ceased to complain of pain and seemed to be in perfect health

The other patient, a nurse in a convent, had a very slight chronic discharge from the left ear, and, like the first patient, had complained greatly of pain behind the ear It was known of her that she was hysterical, and that she was in the habit of taking chloral On her admission to hospital she had the appearance of a case of meningitis or of cerebral abscess She lay in bed, day after day, in a state of lethargy, her eyes closed, her hands not moving She seemed hardly to hear what was said to her, and, when she did answer, it was in a faint whispering voice, very slow From time to time she moaned, complaining bitterly of pain, and flinching at the very lightest touch behind the ear, but mostly she lay like a log and seemed unconscious of all that was going on around her Day after day she remained in this extraordinary state for nearly a fortnight At the end of that time she began to have rapid convulsive up and down movements of the right hand and forearm, the side opposite to the affected ear The mastoid was opened but no pus was found The patient slowly became more natural and eventually left the hospital in fairly good health A year later she had been admitted to another hospital with the same set of symptoms

The Lancet, London

September 22

10 *Early Diagnosis of Cancer of the Stomach. C M Moullin
11 A Study of the Streptococci Pathogenic for Man F W Andrewes and T J Horder
12 *Successful Treatment of a Case of Thoracic Aneurism Threatening to Rupture Externally E D Young
13 Concussion of the Spine with Some Remarks on Concussion in General E M Corner
14 *Boric Acid Relative to Appendicitis R Harrison
15 *Case of Osteitis Deformans with Huntington s Chorea C Mackey
16 *Stammering and Its Treatment. R A Worthington
17 *Phlegmonous Cholecystitis G A. Wright

10 **Early Diagnosis of Stomach Cancer**—Moullin believes that the chief reason why the results of operation for carcinoma of the stomach are not better than they are is that the *diagnosis is not allowed to be made sufficiently early and that* direct palpation through an incision is not resorted to at the first suspicion If the existence of a cancer is suspected an operation should be done immediately

12 **Successful Treatment of Thoracic Aneurism.**—Young reports the marked success attending the treatment of an interesting and apparently hopeless case of thoracic aneurism which had threatened to rupture externally The skin covering the tumor, which was located in the median line of the neck, reaching from the level of the lower border of the third rib to just above the level of the lower border of the thyroid cartilage, was extremely thin tense and shiny, looking like an abscess on the point of bursting The patient was put to bed and kept absolutely quiet The diet was restricted as far as possible, and all stimulants were withheld Iodid of potassium was administered internally, in doses of 10 grains, three times a day, the dose being increased so that by the end of the third week 60 grains were being taken three times a day Collodion was painted all over the surface of the tumor every night and morning The patient began to improve from the commencement of the treatment, until in the [illegible]th wee[illegible] was well enough to assist in the worl of t [illegible]

tumor was very much smaller, there was scarcely any visible expansile pulsation and the overlying skin was normal. The patient returned to his work.

14 Boric Acid in Appendicitis.—Harrison believes that boric acid may be a cause of appendicitis by reason of its inducing the severe digestive disturbances which always precede an attack of appendicitis.

15 Osteitis Deformans with Huntington's Chorea.—Mackey's patient was 67 years of age and began to suffer from twitchings 12 years ago. Twenty six years ago he sustained a severe injury to the spine. The interesting feature in the case is the association of osteitis deformans and Huntington's chorea in the same patient. There appeared to be no malignant growth present in any other part of the body. Owing to the spasmodic contractions which the patient's muscles underwent it was found impossible to take satisfactory skiagrams of his bones.

16 Treatment of Stammering.—The general principles of the treatment of stammering are summarized by Worthington as follows: 1 Remove, as far as possible, any local physical inferiority in any of the organs concerned in speech. 2 Determine in what part of the mechanism the disturbance primarily arises and which of the phenomena are secondary. 3 Ignore the latter but devise exercises of the second class for the former. 4 Endeavor to induce in the stammerer a constant habit of speech which shall itself be an exercise of the first class. He says that a stammerer cured is not the same as a man who has never stammered. Without incessant watchfulness on his part the trouble is certain to recur. The recognition of this fact will prevent much disappointment and misapprehension which too often arises from a belief that the secret of cure is some specific in the hands of this or that practitioner. The treatment of every case is essentially individual.

17 Phlegmonous Cholecystitis.—Wright reports three cases of phlegmonous cholecystitis, one of which terminated fatally. He says that in any case in which there is a suspicion of phlegmonous cholecystitis an immediate operation is no doubt demanded. The exposed gall bladder should be incised, emptied of calculi or bile, and drained, or if it is gangrenous and the patient is not too feeble it should be removed (cholecystectomy). The surrounding area will need cleaning and draining if it is infected.

The Clinical Journal, London

September 5

18 Dilatation of the Stomach R. Hutchison
19 *Deformities of the Arch of the Foot and of the Toes. E M Corner
20 *Pericarditis in Children H W Syers

September 19

21 *Treatment of Surgical Emergencies. A. Baldwin
22 *Blepharitis N B Harman
23 Surgical Treatment of Hepatic Cirrhosis. C. G Cumston

19 Deformities of Toes.—Corner describes some of the common deformities of the toes. The most common affect the big toe and may be classified as deviations to the outside, hallux valgus to the inside, hallux varus, to the dorsal face of the foot hallux extensus to the planta surface hallux flexus, and hallux rigidus a position midway between hallux extensus and hallux flexus. In the production of hallux valgus the bone is altered instead of the joint the head of the metatarsal bone being irregularly developed in consequence of the numerous slight injuries which it receives while the direction of the toe is determined by the shape of the boot. Pointed toed boots necessitate an outward direction of the toe producing a hallux valgus. The brunt of the injury to the front part of the foot is borne by the lower part of the head of the first metatarsal bone which consequently hypertrophies and changes the direction of the articular surfaces so that the great toe becomes bent toward the dorsal surface of the foot, causing hallux extensus. This deformity is especially favored by high heels or a high arch to the instep (pes cavus). In flat footed people the tendency is to throw the weight on the outer part of the foot to limit the dorsal movement of the great toe and to produce hallux rigidus and finally hallux flexus. In these cases pressure and injury from tight shoes occur to the upper part of the head of the first metatarsal and the toe is displaced downward. Thus it will be seen that hallux flexus is associated with the abducted, flat or resting position of the foot, that hallux extensus is associated with the adducted, arched, or active position of the foot, and that each has a condition of the big toe for which the present name is hallux rigidus, which represents the corresponding deformity in a minor degree. Thus there are two types of hallux rigidus, one leading to flexion and the other to extension of the great toe. A similar minor change may be connected with the development of hallux valgus. Hallux valgus, when produced as a primary deformity as the result of mesially pointed boots, has a very deleterious effect on the future use of the foot. Even though people may have a good, active, arched instep, should they develop a primary hallux valgus, the abducted big toe prevents the foot assuming the position of activity and the arch of the instep slowly and steadily flattens, the foot becoming abducted. Treatment while the deformity is remediable is very desirable. Hallux varus occurs as part of the extreme abduction of the foot which occurs with a very high arch. The position of the foot in activity is associated with a position of the toes, consisting in dorsal flexion *digiti extensi*, in the case of the second toe this position is apt to be exaggerated on account of its length and because it is displaced by the big toe in the position of hallux valgus. This position of the second toe may cause pain and lameness and the condition is called hammer toe. The toes may become *digiti rigidi*, or pass to the deformity of *digiti flexi*. Pes cavus is the deformity resulting from the correction of the inversion (varus) of the active and adducted position of the foot, typically it is associated with equinus. Pes planus is an exaggeration of the eversion (valgus) of the resting and adducted position of the foot, typically it is associated with calcaneus.

20 Pericarditis in Children.—According to Syers, pericarditis is not so usual a concomitant of acute rheumatism as was formerly thought, but when it does occur it is acute, tenacious and persistent, being attended with greater risk, both as regards the complete obliteration of the pericardial cavity and subsequent degeneration of the heart muscle. In children it is frequently not associated with joint affection, all that is complained of being some aching in the joints or limbs and "growing pain." The pressure of the pericardial effusion on the lower lobe of the left lung may produce signs interpreted in favor of consolidation presumably pneumonic—dulness and bronchial breathing may be present. Syers thinks that this occasions a frequent mistake in diagnosis. In the early stages of pericarditis a friction sound and a double aortic murmur are apt to be confounded. The error is invariably to interpret the murmur as due to friction. He also notes the fact that loud murmurs in the aortic region are frequently produced by minute lesions and justify a more favorable prognosis than is often given on account of them.

21 Treatment of Surgical Emergencies.—Baldwin discusses the emergency treatment of foreign bodies in the ear, nose, esophagus larynx trachea and bronchi, and of hemorrhage after tooth extraction tonsillotomy and adenoids and of epistaxis and hemorrhage from scalp wounds and after excision of the tongue.

22 Blepharitis.—Harman advises the frequent bathing of the eyelids with an alkaline lotion—simple bicarbonate of soda, plenty of soap and water and friction with a flannel will do just as well. A good cleansing given by the surgeon himself, and a final light swabbing with a weak solution of silver nitrate, will do more than gallons of lotion liberally bestowed during many weeks. Then the application of a smooth antiseptic ointment will keep the lids soft and reduce the liability to the collection of more crusts and scabs. Plain boric ointment in yellow vaselin or a doubly diluted ointment of ammoniated mercury, or the yellow oxid of mercury in a mixture of lanolin and vaselin to the strength of 1 per cent are all of value, the last perhaps most of all. These measures will do much to reduce the unsightly ravages made by the disease, but they will not touch the thing which is most frequently the real cause of the irritation. To get at this the refraction of the eye must be made out objectively, by retinoscopy, and any irregularity found must be corrected with glasses.

Revue de Gynécologie, Paris

Last indexed page 1059

24 (X No 4) *Myomes et fibromyomes kystiques de l utérus P Latteux
25 *144 Hysterectomies abdominales pour fibromes W Cazenave
26 *Sur la prétendue menstruation des femmes enceintes (during pregnancy) V Wallich.
27 *Le kraurosis vulvæ. F Jayle.
28 *Etude des hématuries gravidiques d origine vésicale R. Proust

24. **Cystic Fibromyoma of the Uterus**—Latteux gives the clinical history and histologic findings, in three colored plates, of a case of this kind. The patient was a woman of 43, with irregular, scanty and painful menses since the age of 13, and abdominal pains at times during the last three years, aggravated by reclining Multiple fibromata were found in the uterus, and the organ was removed, with rapid healing

25 **One Hundred and Forty-four Abdominal Hysterectomies for Fibromata.**—These operations were performed in Pozzi's service in the last five years The mortality was 8 31 per cent., in each of the 12 fatal cases there was pre-existing infection either in the fibroma or in the adnexa. About half of the patients were between the ages of 40 and 50 In 84 out of the 144 cases, complications existed, they involved the fibroma in 20 cases, the adnexa in 27, the peritoneum or intestines in 22, a tumor was found in the adnexa in 11 cases, and cancer in the uterus in 3 In one case a dead two months fetus was found Several of these complications were associated in some instances The ovarian function was retained whenever possible and advisable Seven of the patients had undergone a previous partial operation

26 **Menstruation During Pregnancy**—Wallich concludes from a careful review of the literature that an absolutely authentic instance of menstruation in a pregnant woman is unknown. Hemorrhages may be observed, but they lack the periodicity and other characteristics of physiologic menstruation.

27 **Kraurosis Vulvæ**—Jayle presents 11 plates to illustrate his study of this subject, based on some cases personally observed and those on record He remarks that kraurosis is frequently associated with leucoplasia, causing "white kraurosis," when complicated with inflammatory lesions there is "red kraurosis" It is observed sometimes after removal of the ovaries or of the uterus and ovaries, and also in women affected with atrophying sclerotic ovaritis Senile or presenile kraurosis also seems to be associated with ovarian lesions of this kind. Leucoplasic kraurosis became complicated with cancer in about 10 per cent of the cases observed, and senile or presenile kraurosis likewise seems to favor the development of cancerous lesions, but this tendency has never been observed with postoperative kraurosis.

28. **Hematuria of Vesical Origin in a Pregnant Woman**—Proust relates the details of a case in which after an accident a pregnant woman had profuse hemorrhage from the bladder He attributed it to a varicose vein in the bladder, as he believes that pregnancy is liable to interfere with the circulation in this organ, and thus induce a tendency to varicose enlargement of the veins Only two similar cases of serious hemorrhage have been reported, but the cystoscope confirms the frequency of the varicose engorgement of the bladder wall One of the patients was cured by aspiration of the blood clots and local hemostatic measures, but a high incision, with direct hemostasis and suture, is the safest and most certain measure in serious cases The hemorrhage once arrested, the pregnancy continues undisturbed

Centralblatt f Gynäkologie, Leipsic.

Last indexed page 1234

29 (XXX, No 29) *Zur plastischen Verwertung des Uterus bei Defekt des Sphincter vesicæ. M. Hofmeier
30 *Zur Kasuistik der Geburten nach vaginaler Sectio cesarea und Vaginifixur Westphal
31 (No 30) Zur Frage der mechanischen Frucht Abtreibung (abortion) F Hehl
32 Ueber die Breus sche Hämatom Mole. A. Zinsser
33 (No 31) *Ueber Lumbal Punktion bei Eklampsie. E. Pollak.
34 Zur Alexander Adams schen Operation H Palm
35 Fall von ausgetragener intraligamentärer Gravidität (at term) H Rodiger
36 (No 32.) *Subcutaneous Pubiotomy—Die Pubotomie mit der Nadel. E. Bumm.
37 Examination etc., of Midwives—Erfahrungen bei Prüfungen und dem Nachexamen der Hebammen R Dohrn
38 Ueber Dermoide des Beckenbindegewebes (pelvic connective tissue) K. Reinecke.
39 (No 33) *Causes of Disinfecting Action of Alcohol—Ueber die desinfektorische Wirkung des Alkohols und ihre Ursachen. H Füth
40 Benutzung des stumpfen Hakens zur Erleichterung der Armlösung (use of hook for freeing arm) E Hoerschelmann

29 **Plastic Utilization of Uterus for Defect of Vesical Sphincter**—Hofmeier relates the case of a woman of 41 with a vesicovaginal fistula Three operations had failed to restore continence This was finally attained by drawing over the uterus to form a pad to compress the urethra Menstruation proceeds almost normally although with slight disturbances

30 **Births After Vaginal Cesarean Section and Vaginofixation.**—Westphal has performed this operation in 11 cases, and here relates the normal course of one and two pregnancies occurring subsequently in two of the women The usual disturbances were noted in a third case of delivery after the old Mackenrodt technic had been applied but there were no after-disturbances following the two Dührssen operations

33 **Lumbar Puncture in Eclampsia, from Neurologist's Standpoint**—Pollak found such serious changes in the cells in eclampsia that he is convinced the lesions are already irreparable when lumbar puncture is given a trial, as a rule

36 **Subcutaneous Pubiotomy**—Bumm has been so much pleased with the results of what he calls "pubiotomy with the needle" that he states that he would not hesitate to do the operation anywhere, at need, even in a private house, as it is so simple and harmless. The only break in the skin is where the needle is inserted below and where it emerges above, after skirting the back of the pubic bone The Gigli saw is then drawn down and out with the needle, and the bone is sawed This operation enlarges the pelvis sufficiently even with a true conjugate diameter of only 7 cm The parts separate for 3 cm He has performed the operation 11 times and never required more than a minute or two

39 **Disinfection with Alcohol.**—One of the factors in this method of disinfection is the constant increase in warmth of the skin treated with the alcohol The temperature may rise nine degrees Centigrade, and even this temporary heating, Füth claims, may help to check the growth of micro organisms

Deutsches Archiv f klinische Medizin.

41 (LXXXVII Nos 3-4) *Study of the blood.—Zu meinen Blutuntersuchungen (Nachprüfungen einige weitere Beiträge) J Arneth
42 *Relations Between Stomach Secretion and Intestinal Putrefaction—Ueber die Beziehungen von Magensaft Secretion und Darmfäulnis. D von Tabora.
43 *Zum Verhalten der Langerhans schen Inseln bei Diabetes mellitus und zu ihrer Entwicklung K L. Karakascheff.
44 *Ueber Polycythämie mit Milztumor F Lommel
45 Ueber den Nährwert des Glyzerins (nutrient value) B Krapp
46 *Ueber die Wirkung der photodynamischen Substanzen auf weisse Blutkörperchen (action on leucocytes) H Salvendi
47 Photodynamic Phenomena—Ueber den Ablauf der photodynamischen Erscheinung bei alkalischer neutraler und saurer Reaktion. R. Dax.
48 *Ueber experimentelles neurotisches Lungen Oedem L. Jores
49 Action of Ultraviolet Light on Enzymes.—Ueber die Wirkung des ultravioletten Lichtes auf Enzyme A. Jodlbauer and H von Tappeiner
50 Zur Kenntnis des Schwefelstoffwechsels beim Phthisiker (sulphur metabolism) W Brasch.

41 **Classification of Leucocytes**—For years Arneth has been studying with special interest the behavior of the neutrophile leucocytes, and his conclusions have been accepted by most writers on the subject. He classifies the leucocytes in three main groups 1, Normal numbers of leucocytes (normocytosis), 2, increased numbers, and, 3 diminished numbers of leucocytes Each of these groups has the three subdivisions *a*, neutrophile cells developed above the normal *b* the neutrophiles normal, and *c* the neutrophiles pathologically altered For these subdivisions he uses the prefixes hyper (for *a*), normo or iso (for *b*), and aniso (for *c*) By this means a single term expresses a complicated condition as for instance, anisohypercytosis means a condition in which the number of leucocytes is above normal while the neutrophiles are pathologically altered According to his conception, the body in its struggle against toxins uses up large numbers of neutrophiles and substitutes for them must be provided which [illegible] occurs according to certain establi[illegible] that

pay further study. The neutrophile cells are the liveliest and the most powerful of all the cells engaged in the defense of the body, and if isohypercytosis can be artificially induced by injection of some extraneous substance, it may thus prove possible to enhance materially the energy of the resistance offered by the organism. Up to the present time the substances injected to induce hyperleucocytosis have not succeeded in inducing the production of increased numbers of normal neutrophiles, but instead anisohypercytosis, that is, hyperleucocytosis with the neutrophiles pathologically altered.

42. **Relations Between Gastric Juice and Intestinal Putrefaction.**—Hydrochloric acid has direct bactericidal action and, aside from this, the gastric juice in general has a far reaching influence in regulating putrefactive processes in the intestines. When the proportion of acid in the gastric juice is below normal, the putrefactive processes occur unregulated and unchecked, and if the resisting powers of the intestines are unduly taxed otherwise, trouble is liable to result. Nine tables are given by von Tabora with details of the diet of various patients, and of the metabolism as revealed in the urine and stools, and the stomach findings after test meals.

43. **Langerhans' Islands and Diabetes.**—Karakascheff published some time ago the results of research in 4 cases of severe diabetes, and here gives another series of 5 cases, all terminating in fatal coma. He also reviews the findings in a number of children and fetuses in regard to the development of Langerhans' islands and the glands of the region. The conclusions harmonize with those in his previous work, namely, that not the islands of Langerhans alone, but the whole of the parenchyma of the pancreas are more or less involved in the production of what is called pancreatic diabetes. Marchand admits the possibility that the parenchyma may become transformed into islands.

44. **Polycythemia with Enlarged Spleen.**—In the case described by Lommel the autopsy findings indicated that the increase in the numbers of blood corpuscles was probably due to a chronic stasis in the domain of the portal vein, which was also responsible for the enlargement of the spleen. The syndrome of polycythemia with enlarged spleen may be the result of these factors more often than has hitherto been suspected. In the case reported the capacity of the hemoglobin for oxygen was low, but the viscosity of the blood was extraordinarily high, and yet the blood kept up its circulation without enlargement of the heart, even under these circumstances.

46. **Action of Photodynamic Substances on Blood Corpuscles.**—Salvendi's experiments revealed that photodynamic substances have an unmistakably injurious action on the leucocytes, especially on the lymphocytes. The latter break up under their influence in two hours, while the leucocytes resist for twelve days and more.

48. **Experimental Pulmonary Edema.**—Jores has been studying why pulmonary edema does not develop in certain conditions which seem to invite it. He found that disturbances of the gas interchanges have no influence on its development. Even carbon dioxid does not entail edema of the lungs by direct injury of the capillaries in the lungs. On the other hand, he found it possible to induce pulmonary edema in animals by irritation of the peripheral stump of the vagus. This neuropathologic element in the development of pulmonary edema in man has been comparatively neglected hitherto. The vasodilating fibers which are responsible for the edema act on both lungs, even when irritated merely on one side. His experiments were made mostly on dogs and rabbits.

Deutsche medizinische Wochenschrift.

51 (XXXII, No. 36.) Behandlung der Blutungen aus dem Verdauungskanal (hemorrhage from digestive tract). H. Leo.
52 *Improved Technic for Detection of Occult Blood.—Vergleichende Untersuchungen über den Nachweis von Minimalblutungen in den Fæces nebst einer neuen Modifikation der Benzidin Probe. E. Schlesinger and F. Holst (Strauss clinic, Berlin).
53 *Operative Behandlung der genuinen Epilepsie. F. Rinne.
54 Die scheinbaren elektrischen Ladungen des menschlichen Körpers (electric charges of body). Sommer and R. Fürstenau.
55 *Sleep for Children.—Einiges über den Schlaf im Kindesalter. Cassel.
56 Spirochæta pallida bei experimentell erzeugter interstitieller Hornhautentzündung (keratitis). Greeff and Clausen.

52. **Detection of Occult Blood in Stools.**—Schlesinger and Holst have been making a comparative study of the various tests for occult blood in stomach contents and feces. They found the benzidin test the most sensitive, and regard it as an advance, but they have modified it in some points which ensure still greater accuracy and eliminate some sources of error. They advocate marking off the stools with charcoal, and they mention the importance of refraining from meat and from drugs containing hemoglobin or iron for three days before the test. For the modified benzidin test a concentrated solution of benzidin in glacial acetic acid is made fresh, a little benzidin and about 2 c.c. of the acid are shaken up together and set aside to dissolve. A piece of feces about the size of a bean is stirred into a test tube about one fifth full of water. The tube is then plugged with cotton and the suspension of fecal matter is heated to boiling over a flame. It is advisable to have special test tubes for this work, 10 cm. long, so that there need be no fear of any accidental contamination with blood or iron. About 10 or 12 drops of the concentrated solution of benzidin are poured into another test tube and from 2.5 to 3 c.c. of a 3 per cent. solution of peroxid of hydrogen is added. This mixture is the reagent, and one or two drops of the boiled suspension of feces are then added to the reagent after shaking. In case of the presence of blood the brownish fluid turns green or blue. The more blood present, the more the tint inclines to blue, and the color reaction occurs very early, requiring only from a few seconds to two minutes or more with very minimal amounts of blood. The green or blue of the positive reaction turns to a dirty purple after from five to fifteen minutes. If there is no blood in the feces, the color of the brownish fluid remains unaltered even after twenty four hours. The test as modified is much simpler than the others in vogue, while boiling the feces excludes error from any oxidizing process that might simulate the blood reaction. The modified test further allows constant control of the reagent and of the test tubes.

53. **Operative Treatment of Genuine Epilepsy.**—Rinne reports a case of cortical epilepsy in which great improvement followed excision of a portion of the cortex. The operation was done in 1894 after the utter failure of all medicinal and other means of treatment. The patient was a man of 27. The epileptic seizures first appeared at 11, and always following the use of the right arm in lifting, striking or boring. The seizures always began in the right arm. They increased in frequency and severity, and there was general marasmus, paralysis of the face and right arm, and extreme amnesia. The brachial plexus was stretched first, with slight but transient improvement. Then a large flap was cut in the left parietal bone and the dura was incised. Nothing abnormal could be detected in the cortex exposed except that electric stimulation caused flexion and adduction of the forefinger and thumb, and, when the stimulation was very strong, flexion and then extension of the wrist and elbow were observed. The movements of the forefinger and thumb were constant and corresponded to stimulation of a sharply defined area, the anterior central convolution. This area was excised for about 1 cm. by 1.5 cm., and for 3 or 4 mm. deep. The bone flap was loosely replaced and the wound drained. From the moment of the operation the patient was free from any tendency to epileptic seizures or aura for seven months, with no signs of recurrence. After the seventh month the seizures recurred, but they were very infrequent and mild, with intervals of six months of freedom and ample warning. His health is excellent otherwise, and he has been able to found and to manage an extensive business, although his right arm is still somewhat weak. Before the operation he had completely lost his earning capacity. The great improvement in this case may possibly have been due merely to relief from compression.

55. **Sleep for Children.**—Cassel mentions among the minor aids for promoting sleep in children, a light turned low in the room. This takes away the dread of the dark and has a soothing effect on certain children. Knowledge of the presence of a trusted person near the bed also promotes sleep, but the child should not be taken into an older person's bed. He cites a Swedish pediatrist of the eighteenth century, who estimated

that, in Sweden, an average of 700 infants were smothered annually in the bed with mother or nurse A warm bath, about 92 F, for five or six minutes before retiring, has generally a sleep inducing tendency It is especially grateful in the febrile infectious diseases, soothing the nerves A wet pack to the trunk, the temperature about 77 F, when the child goes to bed, may also prove useful, or a cold rubbing down with water, not cooler than 75 F, with or without addition of salt A tendency to masturbation should be combated by physical exercises, sports and playing in the open air until the child is so tired that he drops to sleep at once on going to bed. Cassel never gives drugs to combat insomnia, accomplishing the purpose by other means, except when a child is kept awake by an annoying cough or convulsions

Mitteilungen a d. Grenzgebieten d. Med. u Chir, Jena

Last indexed XLVI, page 1654

57 (XVI No 2) *Zur Chirurgie des Morbus Basedowii. K. Schultze.
58 Zur Kenntnis der Gallenblasen Bronchusfisteln infolge von Cholelithiasis (fistula between gall bladder and bronchus) H Schlesinger
59 *Ueber akuten mechanischen Ileus Ringel (Hamburg)
60 Ueber perirenale Hydronephrose O Minkowski
61 *Zum Kapitel der Diagnose des extra und intraduralen traumatischen und pachymeningitischen Hämatoms F Apelt.

57 **Operative Treatment of Exophthalmic Goiter**—This extensive communication from Riedel's clinic at Jena states that out of 50 patients 36 were cured and 6 materially improved, while in one case the intervention failed to benefit, and 7 of the patients succumbed to heart failure within 24 hours The heart had evidently been too severely injured by the chronic intoxication to stand the stress of the loss of blood and the general anesthesia Local cocain anesthesia is now used in Riedel's clinic by preference, and the mortality has dropped from 12 to 8 per cent In 7 of the cases there was recurrence, but it subsided either spontaneously or under internal treatment The article concludes with the details of the case histories, and seven pages of bibliography on surgical and serum treatment of exophthalmic goiter Schultze remarks that the numerous encouraging articles from surgeons—reporting success in from 80 to 90 per cent of cases—should stimulate internists to refer cases of exophthalmic goiter to the surgeon, after failure of internal measures, in time for operative treatment to be effectual The earlier it is undertaken, the better the results All the 8 milder cases in his experience were cured, and 80 2 per cent of the moderately severe cases were cured or much improved, while only 57 per cent of the severer cases were cured and 7 7 per cent improved The mortality in this group was 28 5 per cent of the 21 patients The symptoms before and after the operation are critically reviewed As characteristic of the disease 25 symptoms are cited, with their proportional frequency, as follows Goiter, 100 per cent, tachycardia, 94, palpitations, 94, exophthalmos, 92, psychic disturbances, 68, tremor, 66, headache, 52, sleeplessness, 40, sweats, 36, emaciation, 30, Graefe sign, 30, vomiting and diarrhea, 28, Stelwag sign, 22, lachrymation, 18, falling of the hair, 18, Möbius sign, 14, nosebleed, 14, polyphagia, 14, polydipsia, 12, pressure on the eyes, 12, edema, 10, hot flashes, 10, friability of the nails, 8, spots before the eyes, 6, and pigmentation of the skin, 6 The above figures all stand for the percentage Treatment with Möbius' antithyreoidin (60 cases) and with rodagen (35 cases) seems to be only palliative in its effect according to the reports published by various writers, and these measures do not always benefit. The results of the experiences to date, he concludes, are decidedly in favor of surgical treatment, as this gives better hope of a permanent cure

59 **Acute Mechanical Ileus**—Ringel's experience warns that operative treatment should not be deferred too long Out of 27 patients with acute mechanical occlusion of the intestines from various causes, on whom he operated, 14 died Autopsy showed more or less extensive peritonitis in all fatal cases, except in two infants who had failed to recover from the shock One of the patients cured by the operation had a large patch of gangrene on the intestine consecutive to volvulus The prognosis is good with prompt surgical measures, but it is grave after complications set in

61 **Diagnosis of Intradural Hematoma**—Apelt reports a case of hematoma of the dura mater diagnosed and cured by trephining He then relates the histories of 13 other cases in which the symptoms or the absence of symptoms was most misleading In one case a hemorrhagic pachymeningitis simulated an apoplectic lesion, there were no convulsions nor paralysis The neurologist and the surgeon will be saved many a disappointment, he declares, if before trephining for a supposed hematoma in the dura mater, they first exclude other affections that might exist, such as internal, hemorrhagic pachymeningitis, alcoholism, sunstroke, certain forms of encephalomalacia, apoplexy, thrombosis of important cerebral arteries with consecutive softening, fat embolism after a fracture, and Reichardt's acute swelling of the brain

Münchener medizinische Wochenschrift.

62 (LIII No 20) Determination of Proteolytic Ferment Action.—Ueber eine einfache Methode zum Nachweis proteolytischer Fermentwirkungen (nebst einigen Ergebnissen besonders bei der Leukæmie) E Müller and G Jochmann
63 *Die Rolle der Grubeninfektionen bei der Entstehung der Genickstarre-epidemien (epidemic cerebrospinal meningitis and infection in mines) L. Jehle
64 Pyocyaneus Sepsis bei Erwachsenen (in an adult) Rolly
65 Hemiplegie bei intakter Pyramidenbahn (intrakortikale Hemiplegie) W Spielmeyer
66 Zur Prognose der Lungentuberkulose E Rumpf.
67 Ueber 375 Selbstmordversuche (attempts at suicide) R. Rothfuchs
68 *Die Anwendung der Hyperämie nach Bier bei einigen Erkrankungen der Diabetiker K Grube
69 Die Romanowsky Färbung nach May (stain) Viereck.
70 Vereinfachtes Extensions Verfahren (simplified technic) A. Hofmann.
71 *Functional Activity of the Kidney—Die Tätigkeit der Niere R. Magnus
72 *Protection from Cadaveric Infection—Wie schützen wir uns und unsere Diener bei Sektionen? C Thorel (Nuremberg)

63 **Epidemic Cerebrospinal Meningitis**—Jehle cites facts which demonstrate that in the epidemics at Neumühl and elsewhere the men became infected in the mines He urges that the fathers of infected children should not be allowed to return to their work in the mines until they have received treatment to render them harmless as bacilli carriers Workmen coming from infected regions should be treated as suspected bacilli carriers

68 **Passive Congestion in Treatment of Affections in Diabetics**—Grube has applied passive congestion or suction therapy in a large number of cases of furuncles or carbuncles in diabetics He reports here the details of 5 severe cases to illustrate the benefits derived and to urge the more frequent use of the treatment He has had good results from superheated air in treatment of diabetic gangrene He applies the hot air at a temperature of 65 C for an hour daily, and has never witnessed harm, but always benefit

71 **Physiology of the Kidneys**—Magnus here presents in compact form the present status of our knowledge in regard to the physiologic activity of the kidneys, analyzing 60 works on the subject that have appeared in recent years He accepts the theory that the urine is the result of secretory activity, not of a process of filtration

72. **Protection During Autopsies.**—Thorel has not found that rubber gloves have diminished the number of accidental infections on the part of the general utility men in the dissecting room On the contrary, the number has increased, probably because the men trust to the gloves and omit the careful cleansing of the hands, or they allow the gloves to become soiled inside He gives the instructions for prophylactic cleansing of the hands, etc., and for the care of rubber gloves, on a placard in his dissecting room Simmonds has recently urged that knives should be made with rounding tips for dissecting work, to prevent accidents, and Thorel has invented a holder which holds the skull while it is being sawed, and prevents injury of the hands. He calls attention to the possibility of pulmonary tuberculosis developing in consequence of infection from a tuberculous process on a cadaver He states that he has had an unmistakable experience of this kind in his environment The best way to avoid cadaver infection among the attendants is to have them trained and skilled in the measures necessary for cleanliness and [illegible] them insured against accidents

Zeitschrift f Geb u. Gynäkologie, Stuttgart.

Last indexed page 314

73 (LVII No 3) *Ueber Pemphigus neonatorum. Koblanck
74 *Verlauf und Ausbreitung der Infektion beim septischen Abortus P Seegert
75 *Zur Pubiotomie. P Rissmann.
76 Ueber Epithel Metaplasie am Uterus, besonders an Polypen. R. Oerl.
77 Epithelial Formations in Lymph Glands and Spaces in Pelvis.—Ueber epitheliale Bildungen der Lymphgefässe und Lymphräume in Beckenlymphknoten bei Uteruskarzinom und bei karzinomfreien entzündlichen Adnex Erkrankungen A. Sitzenfrey
78 (LVIII No 1) Fall von diffusem Myom mit beginnendem Karzinom in der hyperplastischen Uterus-Schleimhaut. V Doca.
79 *Ueber Eklampsie, Esch
80 Behavior of Ovaries, Tubes and Remains of Uterus After Total or Partial Removal of Uterus in Rabbits.—Experimentelle Untersuchungen über das Verhalten der Ovarien und Tuben sowie des Uterusrestes nach vollständiger resp teilweiser Entfernung des Uterus bei Kaninchen. G Burckhard.
81 Mechanism of Parturition with Frontal Presentation and Mentoposterior Expulsion—Beitrag zum Studium des Mechanismus partus bei Deflexionshaltung A. Leo.
82 *Ueber Endometritis atrophica purulenta fœtida. P Bröse.
83 Zur Kenntnis der benignen chorioepithelialen Zell Invasion in die Wand des Uterus und der Tuben. R. Meyer

73 **Pemphigus Neonatorum.**—Koblanck has found the *Staphylococcus aureus* almost invariably in his experience with pemphigus in infants In a recent case the child was born with pemphigus Syphilis could be absolutely excluded He has always succeeded in curing the pemphigus with 70 per cent alcohol applied to the vesicles and their vicinity, carefully preventing the spreading of the germs over the skin For this reason the bathing of the infants is forbidden until the pemphigus is cured

74 **Course and Distribution of Infection With Septic Abortion**—Seegert states that out of the 15,000 cases of abortion treated during the last 10 years in the obstetric and the gynecologic clinics at Berlin, about 15 per cent were febrile cases This is less than the actual number of cases, as many of the patients were seen briefly and fever may have occurred before or after without the physician's knowledge In case of a pyemic affection after abortion, if an effusion was found in the small pelvis, in addition to the pyemic thromboses and metastases, the case invariably proved to be one in which criminal or artificial injury had preceded the pyemia In such cases, the thrombi were found more in the uterine veins and the ovarian vessels were seldom free, while metastatic processes in the thorax were always present About 450 patients presented serious symptoms after a febrile abortion, and 94 died The autopsy findings in 82 are analyzed to study the course and spread of the infection, with details of a number of cases Treatment was by digital examination of the uterine cavity, followed by irrigation with diluted alcohol In the recent cases fluids were given freely, especially wine, brandy, beer, and milk and coffee, combined with solutions of grape sugar Scrupulous care of the mouth was taken and in prevention of decubitus Quinin was given by the mouth in large doses, or if the appetite suffered or vomiting followed, the quinin was given subcutaneously, from six to eight syringefuls of a sterile 25 per cent. solution of quinin bihydrochlorate daily with careful oversight that the patient does not make any movement and is kept as warm as possible Some of the cases with 70 chills terminated in recovery under this treatment, and even one with metastatic ophthalmia

75 **Pubiotomy**—Rissmann has performed this operation three times and is an enthusiastic advocate of it provided simple drainage of the prevesical space is ensured Other factors to which he attributes his excellent results are the sagittal incision to spare the muscles, the introduction of the finger to protect the parts during the sawing, the application of a firm bandage over the pelvis during the obstetric maneuvers, the drainage with a special drain, which he illustrates, the absence of a firm bandage over the pelvis during healing and the advice to be up and about early There was no temperature in his cases

79 **Eclampsia at Olshausen's Clinic.**—Esch continues the previous reports which comprised 603 cases by relating the experiences with 496 cases during the years 1900 1905 inclusive This brings the total to 1,099 cases of eclampsia observed at the Berlin gynecologic clinic since 1885 Of the 496 women, 106, that is, 21 4 per cent, died In at least three fourths of the cases the convulsions ceased after delivery, but in 9 instances the eclampsia subsided without interruption of the pregnancy and did not recur during the delivery In 9 other cases eclampsia had been observed at a preceding childbirth. Among the prodromal symptoms were pains in the stomach in 102 cases, edema in 143, headache in 178, tardy vomiting in 106, amblyopia in 4, and transient amaurosis in 17 In one case the amaurosis lasted only for a few hours and eclampsia developed four weeks later Bilateral detachment of the retina was observd in one case and vision was not restored completely for several months In 78 cases the convulsions developed after delivery or during the puerperium Venesection was frequently applied, from 300 to 400 c.c of blood being withdrawn

82 **Fetid, Purulent Atrophying Endometritis**—Bröse suggests the term "hysterozena" for the condition of which he describes 2 cases It is observed only in senile women, and may possibly be due to the action of saprophytes in senile endometritis Treatment with loose tamponing with iodoform gauze and drainage, after exploratory curettement, has given favorable results Cauterization with zinc chlorid finally succeeded in conquering the fetid odor Then the secretion was completely cured by rinsing the uterus with crude wood vinegar (3 tablespoonfuls to a quart of water)

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers

INTERNATIONAL CLINICS A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery Neurology, Pediatrics Obstetrics Gynecology etc, by Leading Members of the Medical Profession Throughout the World. Edited by A. O J Kelly A.M M D Philadelphia with the Collaboration of W Osler, M D, J H Musser M.D and others Vol. III Sixteenth Series, 1906 Cloth Pp 302 Price $2.00 Philadelphia J B Lippincott Company, 1906

RHYTHMOTHERAPY A Discussion of the Physiologic Basis and Therapeutic Potency of Mechano-Vital Vibration to which is added a Dictionary of Diseases, with Suggestions as to the Technic of Vibratory Therapeutics, with Illustrations By Samuel S Wallian A.M., M.D President American Medico-Pharmaceutical League Ex President Medical Association of Northern New York etc. Cloth. Pp 210 Price $1 50 net. Chicago The Ouellette Press 1906

A MANUAL OF MIDWIFERY By Thomas Watts Eden, M D C.M Edin F R.C P, Assistant Obstetric Physician and Lecturer on Practical Midwifery Charing Cross Hospital, etc. With 26 Plates and 233 Illustrations in the Text. Cloth Pp 518 Price, $4.20 Philadelphia P Blakiston s Son & Co, 1906

THE SCHOTT METHODS OF THE TREATMENT OF CHRONIC DISEASES OF THE HEART with an Account of the Nauheim Baths, and of the Therapeutic Exercises. By W Bezly Thorne, M.D M.R.C.P Fifth Edition. Cloth. Pp 140 Price $2 00 net. Philadelphia P Blakiston s Son & Co 1906

A SHORT PRACTICE OF MEDICINE. By Robert A. Fleming M.A. M.D F.R C P E F R.S E Lecturer on Practice of Medicine, School of the Royal Colleges, Edinburgh etc. Cloth Pp 748 Price $4 20 net. Philadelphia P Blakiston s Son & Co 1906

THE EXTRA PHARMACOPOEIA OF MARTINDALE AND WESTCOTT Revised by W H. Martindale Ph.D, F C S., and W W Westcott M B D P H Twelfth Edition Flexible Leather Pp 1045 Price $4 20 London H K. Lewis, 1906

VARIATIONS IN THE PEROXIDASE ACTIVITY OF THE BLOOD IN HEALTH AND DISEASE By J H Kastle and H L. Amoss. Hygienic Laboratory Bulletin No 31 Paper Pp 20 Washington Government Printing Office 1906

AN INTRODUCTION TO PHYSIOLOGY By William Townsend Porter M D Associate Professor of Physiology in the Harvard Medical School. Cloth Pp 537 Price $2 50 Philadelphia J B Lippincott Company 1906

A STATISTICAL STUDY OF THE PREVALENCE OF INTESTINAL WORMS IN MAN By C W Stiles and P E Garrison Hygienic Laboratory Bulletin No 28 Paper Pp 77 Washington Government Printing Office 1906

MEDICO-CHIRURGICAL TRANSACTIONS Published by the Royal Medical and Chirurgical Society of London Vol LXXXIX. (Second Series Vol LXXI) Cloth Pp 757 London Longmans, Green & Co 1906

HOW TO SUPPRESS A MALPRACTICE SUIT and Other Medical Miscellanies. By Thomas Hall Shastid A M M D LL.B Cloth Pp 128 Price $1 50 Marion Illinois Marion Publishing Company 1906

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Address

THE GROWTH OF NEUROLOGY

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON NERVOUS AND MENTAL DISEASES AT THE FIFTY-SEVENTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, BOSTON, JUNE 5-8, 1906

WHARTON SINKLER, M.D.
PHILADELPHIA.

I am very glad to have this opportunity of thanking you for the honor conferred on me in making me chairman of this Section. It is a distinction of which one may justly be proud, for the Section has grown from a small beginning in 1891 to one of the most important and widely known in the American Medical Association.

It is interesting to consider the development of the Section. Prior to the year 1891 there was no section devoted to this branch of medical science. In 1887 a new section was formed and this was called the Section on Medical Jurisprudence, Chemistry and Psychiatry, and this by expansion began to include the consideration of nervous diseases. In 1891, the subject of neurology having become so prominent in the discussions of the Section, the title was changed to the Section on Medical Jurisprudence and Neurology. In 1900, the scope of the Section had become such that it seemed advisable to again change the name, and it then became the Section on Nervous and Mental Diseases. Thus we have kept abreast of the progress in neurology throughout the world.

The list of men who were influential in the organization and development of this Section is well worth considering, for it contains among the names those of the brightest lights in neurology in this country. As chairman of the Section on Medical Jurisprudence, begun in 1887, are to be found the names of E. M. Reed, J. G. Kiernan, T. B. Evans and T. D. Crothers. In 1891, in the Section on Medical Jurisprudence and Neurology, H. N. Moyer was elected chairman. He was followed by Charles K. Mills, in 1892, and in regular order came J. G. Kiernan, D. R. Brower, T. D. Crothers, W. J. Herdman, C. H. Hughes, Frederick Peterson, H. T. Patrick, H. A. Tomlinson, R. A. Dewey, F. W. Langdon, F. Savary Pearce and J. H. McBride.

To those who can look back thirty years, it is amazing to consider the progress in the knowledge of the diseases of the nervous system. Until the latter half of the nineteenth century, no special attention was given to this branch of medical science in the schools, and few physicians ventured to claim neurology as a specialty. How different it is now! There is not a college of any size in the country which has not a chair of nervous and mental diseases, and almost every city has its neurologic society. The interest taken in neurology has increased in the profession at large, and this is shown by the large attendance at the meetings of this Section by members of the Association whose practice is not especially devoted to nervous diseases. It has been for years the custom of the general practitioner to regard the study of nervous diseases as not only difficult and obscure, but unprofitable, and for this reason he has put it aside and felt that there was no use in trying to do anything in the way of diagnosis or treatment of a case of nervous disease. It is different now, and the effect of teaching in the colleges is obvious to every one who meets the general practitioner in consultation. The meetings of the Section have each year been of greater interest and value to the members, not only in the character of the papers presented, but in the discussion of them. This year I can point with pride to our splendid program, which will be seen to include not only many papers on mental diseases, their etiology, pathologic anatomy and medicolegal relations, but the consideration of many organic and functional nervous diseases. It is noteworthy also to observe that the papers presented are not merely reports of individual cases, but a critical and scientific study of the nature of the various diseases considered. No attempt has been made to present a symposium on any special subject, for the reason that this would have taken so much time that many valuable papers would have been of necessity excluded. As it is, the papers offered have been in excess of the number allowed by the by-laws of the Association. This number, as you know, is forty. Had we been able to accept all which have been presented, there would have been at least fifty, and it is much to be regretted that many important contributions had to be declined on account of the program being full when they were presented. I believe that in the future it will be a wise plan to limit the time for the reading of each paper to twelve minutes and the discussions to five minutes, so that all papers which are offered may be presented before the Section. I am not in favor of requiring that the papers shall be read in abstract, as this mars their interest and value, but by excluding lengthy histories of cases and condensing pathologic reports it would be easy to present almost any paper in the space of ten or twelve minutes.

An innovation this year, and I believe that it is one which will accrue to the advantage and importance of the Section, is that of printing and distributing the transactions of the session. This will include all of the papers and discussions, together with anything else of importance connected with the session. Some of the other sections have published transactions, but this is the first time that the Section on Nervous and Mental Diseases has undertaken the task. I trust that this will meet with the hearty approval and co-operation of the members of the Section. In order to secure the publication of the transactions by the Association, it will be necessary to secure 75 subscriptions at $1.00 each. This does not cover the total expense, the balance being borne by the Association. The transactions are bound in cloth and make a handsome volume We must, therefore, look to the members to subscribe to one or more copies each

Through the courtesy of Dr James J Putnam, the Section has been invited to hold one of our meetings at the Massachusetts General Hospital, so as to enable the members to visit the neurologic wards in this famous old institution and to have demonstrations of different sorts made before and after the meetings, and to allow the presentation of cases We have selected Thursday afternoon for the meeting there

I am sure that all of the members of the Section share with me the regret that I feel in the absence of the former secretary, Dr D I Wolfstein Last autumn Dr Wolfstein, who for many years had been in poor health and had had two or three attacks of renal colic, was obliged to undergo the operation of nephrectomy He made a good recovery, but was so generally shattered in health that he has been obliged to give up practice and go abroad for a year During his term of service he proved a most valuable and efficient officer of the Section and did much toward promoting its growth and prosperity We have been fortunate in securing the services of Dr Weisenburg, who has been appointed to his place

It is a source of some regret that we have no distinguished foreign neurologists with us Your chairman and secretary sent invitations to several of the most distinguished men in this line in England and on the continent, but each one, while expressing great appreciation of the honor conferred on him, was obliged to decline for some good and sufficient reason The International Medical Congress at Lisbon and the meeting of the British Medical Association at Toronto interfered with the acceptances in most cases

The members of the Section have received a cordial invitation from Dr Flood, the superintendent of the Massachusetts Hospital for Epileptics at Palmer, Mass, to visit that institution The hospital is situated in the village of Palmer, about 84 miles west of Boston To those who are interested in the colony treatment of epileptics and the insane, this institution affords an admirable opportunity for study

Original Articles

THE MOTOR DEGENERATIVE SEQUENCE IN DEMENTIA.*

H A TOMLINSON, M.D
Superintendent of the St. Peter State Hospital.
ST PETER, MINN

In the infant pantomime plays the principal part in expression, and as the child grows older this pantomime becomes more complicated and graphic, especially in so far as the movement of the eyes, the muscles of the face and of the arms is concerned, so that the impressions from the environment and the emotions involved are reflected in these movements In those individuals who are born blind, this association of pantomime with the afterward acquired vocal or graphic means of expression persists, so that the muscles of expression reflect the emotions in any given form of mental activity In the ordinary individual, however, these modes of expression are eliminated by education and the exigencies of social intercourse, which require the putting on a mask that shall conceal the effect of the conditions in the environment on the individual so far as they are emotional Therefore, as the result of training and the influence of convention, and just in proportion with their extent, there is the exercise of restraint on the motor manifestations of mental activity However, when, as the result of defect in the constitution of the individual, and the influence of untoward conditions in his environment, there is loss of mental capacity, and, therefore, of the power of inhibition, or interference with the means of expression, there is the tendency toward the reversion to these primitive auxiliaries of expression, to supplement the acquired faculty that the loss of capacity for control has rendered more or less inefficient, just as occurs in the confusion of mental aberration and after aphasia When this loss of mental capacity becomes extreme, or the mental alienation of the individual makes him entirely introspective, there again develops the tendency to the suppression of the motor manifestations of mental activity, not as the result of volition, but because of the loss of capacity to generate them, and, as these emotions are less frequently generated, there follows a sequential and essential degenerative motor change which has its origin in that form of atrophy in the motor generative portion of the brain that results from disuse.

The dependence of motor manifestations on mental activity is not well understood, and too little thought of with relation to the significance of variation or suppression of muscular activity as a sequence to loss of mental capacity We lose sight of the fact that very few forms of motion are in direct response to external stimuli Aside from those motor manifestations that are so intimately associated with emotional activity, and are included under the term expression, there are numerous other forms of muscular activity that are a more or less direct response to the stimuli resulting from mental processes, even although they are not a direct reflex of the conditions involved in these processes These motor generative impulses are centrifugal, and have their basis in the liberation in consciousness, as the result of indifferent stimuli, of pre-existing impressions that give rise to them To illustrate, a man may be sitting under a tree, on a hot day, completely engrossed in a train of thought that has no relation to his environment The sun reaches a position so that it shines directly on him After a time, and without any conscious interruption of his train of thought, he will change his position so as to again get into the shade The muscular movements involved in this change of position, while reflex, are extremely complicated and involve the intervention of intelligence A new-born child, or a demented person would not and could not change his position under similar circumstances, although both might manifest evidence of discomfort by irregular and inco-ordinate movements Even in acute mental aberration, the accompanying loss of capacity has the same effect, because, in delirium, stupor, or the morbid introspection associated with depreciatory or persecutory ideas, extreme discomfort or even the presence of physical danger, if apprehended, may not give rise to any movements that have their origin in centripetal stimuli There can be no doubt but that these impressions reach the brain, but there is no active consciousness, and the correlation and co-ordination of these impulses does not take place although we have found, as the result of repeated investigation, that the individual is impressed by them, and can recall the nature of these external impressions in detail, after the subsidence of the centrifugally generated processes, that for the time being dominate consciousness.

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Fifty seventh Annual Session June 1906

There are numerous other forms of muscular activity that are more or less in direct response to the stimuli from mental processes. These movements are largely combinations of the survivals of the simple changes in the multicellular organisms necessary to approach food substances or avoid sources of danger. Aside from these simple forms of motor manifestation, there are the more complicated movements involved in sexual attraction, which bring about changes in form, posture and expression. The growth of these different forms of muscular activity, and their complication in accordance with the development of the organism in response to the growing complexity of its environment, results in the multiplication and variation of these motor manifestations, and their combination and recombination to such an extent that they become abstracted from their primary relation, are no longer entirely reflex, but automatic, supplementary and centrifugally generated in response to stimuli coming from the vegetative or reproductive organs. That they are automatic is shown by the fact that they are manifested independently of active volition, and that they are persistent in their primary form is illustrated in the movements, inco-ordinate but instinctive, of the new-born child.

The study of the development of the different parts of the cerebral cortex confirms this contention. The branching out of the brain stem to form that part of the cortical envelope concerned with the special senses, the later association of these centers, and their relation with the centers of emotion, and, finally, the extension forward of projections of those motor areas having to do with the most complicated and completely abstracted forms of activity involved in expression, both vocal and graphic. Then the development around these areas of a cortical mantle apparently purely inhibitive and dirigent in its function, and which, in its turn, becomes abstracted from any direct relation with the motor generative activities it inhibits and regulates. This abstraction of the functions of that part of the cortical mantle that has to do with what are ordinarily termed the processes of intellection, that is, the processes of correlation and co-ordination, is important for us to appreciate in order that we may understand how mental reduction affects motor activity, and finally brings about degenerative change from want of use. It is too little understood that the primary function of the so-called higher cortical centers of the brain is that of inhibition, and that their relational, co-ordinative and dirigent functions are an after development. Therefore, in the progress of degeneration in the intellectual sphere, loss of capacity comes primarily in this dirigent, co-ordinative and relational function, leaving the primitive inhibitive function comparatively unaffected. So that impulses coming through the different avenues of special and common sensation are simply registered, with the result that motor activity does not follow, the degree of loss of capacity for correlation and direction affecting the extent to which capacity to generate motor activity is lost. The process of degeneration follows this order. Those forms of motor activity involved in the most abstract forms of expression are the first ones to be lost, and this failure shows itself in those co-ordinated movements that are the last in the order of development. They are manifested in stammering, slurring of sounds, dropping of letters and syllables, tremor in writing, running of words together, elision of letters or syllables, and, finally, imperfectly-formed characters, which gradually degenerate into a running wave-like mark, or irregular and formless angular strokes. We have seen these degenerative changes go on from one form to the other until there was neither vocal nor graphic expression, and then as gradually disappear in the reverse order. They are most common in general paresis, but are not infrequent in alcoholic and syphilitic insanity, and we have seen them in their grosser forms in primary degenerates. Some years ago we reported a number of such cases in another connection, and from that report the two following are selected as illustrative.

> The first, a case of syphilitic brain disease, following a severe convulsion, developed paraphasia, myotonia, and paresis with tremor, also complete inhibition of intellectual function, with suspicion and blind resistance toward any effort in his behalf. He gradually became worse, the paraphasia becoming complete motor aphasia, the myotonia degenerating into athetosis, finally ending in muscular tremor, with complete motor inco-ordination. At this stage another profound convulsion occurred, with right hemiplegia. This was followed by gradual recovery, passing upward through the different stages traveled on the downward path, until he was able to walk about, feed himself and speak intelligibly. This transition was repeated with varying degrees of uniformity three times in eight months, each transition showing the stages less well marked and being of shorter duration until finally, following another severe convulsion, there was complete annihilation of mental life and voluntary motion. He lived, however, for about three months in this state. A necropsy was not allowed. The other case, a young girl, a low grade imbecile, who came into the hospital with a history of epileptoid convulsions with rapid mental reduction. On admission she could express her wants, answer questions and care for herself. Degeneration proceeded very rapidly, however, paresis became marked, and she finally became bedfast. The vegetative functions remained intact, and the excrementary functions were performed automatically. There was no co ordinated muscular movement or mental activity. She laughed and cried like a baby, had no articulate expression, and did not comprehend spoken words, although she apparently understood pantomime. She was without capacity to relate or co ordinate external impressions. She, too, gradually recovered, passing progressively upward the path she had traveled downward. She afterward acquired considerable manual dexterity and learned to read.

Again, these degenerative changes may only involve the most highly abstracted manifestations, such as those involved in the co-ordinate expression of the most complicated relations, or the finer movements involved in manual dexterity, as we see them manifested in confusion and inco-ordination in senility.

It is interesting to note in this connection that the activities involved in the functioning of the vegetative organs do not normally give rise to sensations that are apparent in consciousness, or that directly stimulate the dirigo-motor apparatus, and while these functions may be affected by conditions in emotional activity this affection is indirect through the vasomotor apparatus, and the functional stimulus is reflex. Therefore, there may be, as in trance conditions and ecstacy, complete absence of motion and intelligence, without any interference with the functional activity of the vegetative organs. In those cases of insanity with which there is associated disease in the vegetative or reproductive organs, their functional activity results in painful sensations. These may give rise to all sorts of disagreeable and bizarre manifestations in consciousness, and thus come directly under the inhibitive influence of th higher cortical centers, with the result tional activity may be perverted or inhibited, without the presence of organic change in the viscera themselves, so that the individual believes that he can not swallow, that the stomach is distended, that the intestines are paralyzed, contain poison or have disappeared from the abdominal cavity, and, again, that the anal sphincter is permanently closed or relaxed, with the result that so far as these functions are volitional they are inhibited.

After mental reduction proceeds to the extent that it involves loss of memory and power of attention, there begins to be evidence of relaxation of the normal tension in the facial muscles and the eyeball, so that there is not only loss of mobility in the facial muscles, but the lack of expression is increased by the dullness of the sclerotic, and the flattening of the anterior chamber that follows the loss of tension in the eyeball.

The next change to become apparent is the involvement of the muscles of the hand and arm, resulting in the loss of the finer movements and manual dexterity. As a rule, this is as far as the degenerative changes go, unless the mental reduction becomes extreme. It is interesting to note that these motor degenerative manifestations are similar to those present in senility, except that in dementia the paresis is spastic, while in senility it usually takes the form of tremor. There is a closer resemblance to the paresis of dementia than that which accompanies paralysis agitans, and this is particularly true of the involvement of the muscles of expression. When dementia becomes extreme, and especially in the course of primary degeneration, the motor disturbance may be considerable and manifest itself in spastic paralysis, involving first the musculature of the hand and forearm, so that the fingers become flexed in the hand, the hand on the wrist, the forearm pronated and flexed on the arm. In the lower extremity the involvement of the muscles follows the same order, but is more apt to be symmetrical and does not become so extreme. Finally, the head becomes flexed and the neck muscles rigid. That these changes are not due to primary involvement of the cord is shown by the fact that they are present in temporary cerebral conditions, where the manifestations of mental reduction are the result of accumulation of fluid in the meninges, or the paresis of autointoxication. Also, in dementia they may appear and disappear at first, and it is only after mental reduction becomes extreme that they are persistent. The following case illustrates this extreme involvement.

C. C., 25 years old, born in Sweden, laborer. Father living, mother died of smallpox. Father suffers from "asthma and rheumatism."

The patient was always less intelligent than his brothers and sisters and as he grew older became irritable and morose and subject to outbursts of ill temper and violence. Since puberty he had grown more dull and his temper more ungovernable. He was also a chronic masturbator. For three months before coming to the hospital he had been growing more stupid, sullen and filthy in his habits. He was also brutishly violent at times.

When admitted he was suffering from indigestion and constipation. The extremities were cold, blue and clammy. The tongue protruded hesitatingly in the median line, speech was slow and indistinct and there was a coarse tremor in the tongue. The reflexes were present but co-ordination could not be tested. Clonus was present. He did not take food voluntarily nor sleep well.

His general condition improved during the first month and he got so that he would feed himself and answer simple questions. Soon after coming to the hospital the fingers of the left hand began to contract and were soon firmly flexed in the palm. Edema set in also in the left arm and both legs. After a period of two months he again improved, was out of bed, fed himself, answered questions, and would go out walking. He did not pay any attention to his surroundings, however, and was filthy in his habits. When walking he assumed a *stooped position, with the hands pressed on the abdomen*, the head bent forward and to the left. Most of his movements were apparently automatic. During the next two years his condition was practically unchanged. Sometimes the contractures would almost disappear, but with each return became more marked until finally, in the spring of 1897, the hand and forearm, foot and leg, on the left side, were so much involved that he could no longer move about or help himself. After he was put in bed it was noted that his lungs were involved in chronic fibroid degeneration, with tuberculous infection.

The contractures gradually became more marked, all of the extremities were involved, he became generally rigid, and was incapable of voluntary movement. He would swallow when food was put in his mouth, the bowels and bladder were emptied automatically, he never spoke nor showed any evidence of intelligence. He died Sept. 3, 1897.

Postmortem, there was marked emaciation and the extremities were distorted by contractures. The skull was very thick, the sutures had disappeared, the diploë was present in only small areas and there was very little cancelous structure. The dura was thickened, but not adherent to the skull. There were 160 c.c. of cerebrospinal fluid. The arachnoid space was distended with gelatinous fluid, especially at the vertex and over the frontal lobes. The dura was adherent along the median fissure from the vertex anteriorly to the prefrontal region and for 5 cm. on either side. The pia was translucent over the frontal lobes and there were white streaks along the vessels over the whole convexity. The convolutions of the frontal and parietal lobes were much flattened and the sulci distended with fluid. The insula was uncovered on the left side and partially so on the right, on account of atrophy of the surrounding convolutions. There was marked dimpling from atrophy over the frontal and parietal lobes also. The ventricles were distended, the ependyma edematous and, in the floor of the fourth ventricle, granular. The cortex was thin, pale and nowhere more than 2 mm. in thickness. The lungs were diseased, the heart, spleen and liver small, and the kidneys the seat of parenchymatous change engrafted on a chronic interstitial nephritis. The generative organs were small and undeveloped.

So far as our observation goes, when the motor degenerative changes follow in the sequence here outlined, that is, beginning first with those motor activities last in the order of development, and follow in the regular order, the change is a permanent one, but when this sequence is departed from, or the paresis is not symmetrical and progressive, there is always the probability that the power of motion will return more or less completely. Postmortem in these cases, the external appearance of the brain and its coverings is always the same. Where there has been much spastic involvement areas of pachymeningitis are always present, with more or less recent extravasation of blood over the inner surface of the dura. The arachnoid space, especially over the anterior and middle portion of the brain, is filled with gelatinous fluid. The pia is translucent or partially opaque, with white streaks along the vessels, and there are delicate bands of adhesion between the pia-arachnoid and dura over the frontal region superiorly and at the base. The convolutions of the frontal lobes are very much shrunken and the fissures gape widely. The insula is partially uncovered by the atrophy and retraction of the convolutions surrounding it and there are marked areas of atrophic dimpling in the superior parietal lobule and in the angular gyrus. The visual area in the cuneus seems never to be involved to an appreciable extent macroscopically. Everywhere over the superior portion of the frontal lobes and the antero-lateral portion of the parietal lobes there is an essential shriveling of the cortical gray matter and the underlying white substance Whereas, in ordinary dementia, when the sequential motor involvement is not marked, the atrophy is present only in the frontal lobes, anterior to the precentral fissure, and while the convolutions are flattened the fissures do not gape widely and the white substance is not involved perceptibly Histologically, the changes found are degenerative, and in one case we have traced them to the lumbar enlargement Usually they only involve the cortex and fibers of association in the brain, and there are always numerous healthy cells and fibers in a given field Besides, the degeneration is not focal, nor are there any continuous areas, or even groups of cells, unless, on account of the presence of some accidental condition, like that produced by the occlusion of a blood vessel Then the changes which result are destructive and need not be confounded with the general degenerative changes. The extreme cases of motor degenerative change are practically confined to primary degenerates, where the mental reduction has begun soon after puberty, progresses rapidly and becomes extreme. This tendency is, in its turn, most marked in those individuals in whom there is the most evidence of defective development and the greatest number of the stigmata of lack of mental capacity They are usually the offspring of the alcoholic and syphilitic, seldom of the insane or the tuberculous

THE BLOOD PRESSURE IN PARESIS *

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There is a general belief that the blood pressure in paresis is low This belief is based mainly on the observations of Pilcz,[1] who found normal tension in the earlier stages, falling tension as the disease advanced, with extreme hypotension in the terminal states Janeway[2] regards this hypotension as analogous to the pressure of other wasting diseases but rather more pronounced Pilcz used the Gaertner instrument Alexander,[3] a year later, stated that the blood pressure in paresis was low in the end stages From an examination of ten cases Craig[4] found the blood pressure in paretics high in the depressed condition, low in the excited. He regards his observations as favoring but not establishing Cramer's theory, that blood pressure is a cause of mental states and rapid changes

These observations would naturally lead to the hope that we have in blood pressure a practical aid in the diagnosis of paresis from other nervous diseases

In view of the great importance of this diagnosis, especially in the early stages, the results of many observations should be tabulated before we can establish a general rule and rely on it as an aid in the diagnosis of the individual case. The following observations are offered as bearing directly on this point. The results tend to show that the blood pressure test, while of great value here as elsewhere in determining the circulatory condition of the individual, is likely to prove of little help in the diagnosis of paresis from other nervous diseases

I have examined 108 male patients with this disease The majority of the cases were inmates of the Danvers Hospital, the Worcester Hospital, the Medfield Asylum, the State Hospital at Tewksbury and the McLean Hospital, to the superintendents of which institutions I am indebted for the opportunity The remainder were seen at the Neurologic Clinic of the Massachusetts General Hospital and in private practice

The following classification shows the comparative ages Under 40, 28, 40 to 50, 41, 50 to 60, 33, over 60, 6

Among these 108 cases definite cardiac, renal or arterial diseases was absent in only 44 cases

The Riva-Rocci instrument was used in all observations In certain of the cases first examined the 5 cm cuff was used, but was discarded on account of its unreliability, and the cases in which it was used as far as possible re-examined The majority of the tests were made with either the 9 cm cuff of the Riva-Rocci type, or the 12 cm cuff of the Janeway The observations with the 5 cm cuff are included in the tables, and offer an excellent example of its disadvantages

My observations would not quite justify the conclusion that a width of at least 12 cm is necessary, for I have found the registration of the 9 cm cuff quite constant, and varying so little from that of Janeway that for clinical purposes the former seems to me to answer every requirement.

Ordinary precautions only were taken in making the observations, for example, having the arm on a level with the heart, and snugly adjusting the cuff Since the question at issue was that of the practical value of the blood pressure in diagnosis, no attempt was made to reduce the observations to the accuracy of physiologic experimentation The average blood pressure of all the cases, without reference to heart, kidney or arterial disease, was as follows

Age.	5 cm cuff.	9 cm. cuff	12 cm. cuff
Under 40	145 mm	123 4 mm	125 mm
40 to 50	152 mm.	124 mm	128 75 mm
50 and up	150 3 mm.	140 mm	147 1 mm

These figures are certainly well above the average normal, which would, perhaps, be not far from 115 with the broad cuff for males under 40, 138 for males over 50, and somewhere between these figures for males between 30 and 40

This result would contraindicate the impression I believe to generally prevail, that the blood pressure in general paralytics on the whole is low On the contrary it would indicate that the blood pressure in this disease is, on the whole, high This would naturally result from the large proportion of cases presenting hardened arteries, with tendency to enlargement of the heart and to chronic renal degeneration. In point of fact it is doubtless these conditions that we are measuring rather than the general paralysis Then, too, it is very common for paretics to overeat and to take on flesh during the demented stage, a fact which tends to produce higher readings, even with broad cuff.

The renal complication was allowed for by Pilcz, who noted that when Bright's disease was present, hypertension was in evidence He also noted that depressive mental states, as well as remissions of symptoms, brought about a rise

It would seem, then that before using the blood pressure as a diagnostic aid in general paralysis, we must

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[1] Wien. klin. Woch. 1900 p 277

[2] The Clinical Study of Blood Pressure. Appleton & Co., 1904 p. 253

[3] Lancet, 1901, vol. ii, p. 18.

[4] Lancet, 1898, p. 1743

Dawson[3] has recently published a report of an investigation of the blood pressures at different points of the arterial tree of the dog The pressures were determined by means of valved mercury manometers connected directly with the arteries of the animal. He found in the carotid artery, for example, the pressures to be systolic 162, diastolic 103, mean 122 mm Hg With each pulse wave, therefore, the pressure ranges through 59 mm Hg For the sake of convenience, this range of pressure with each pulse wave has been termed the pulse pressure The pulse pressure is the difference between the systolic and diastolic pressures In addition Dawson has shown, in confirmation of older investigators, that the mean and diastolic pressures are practically constant throughout the large arteries, and that the systolic pressure obtained from branches of the main arterial trunk falls off considerably as the smaller vessels are approached (Fig 1)

Here special attention should be directed to the fact that the mean and diastolic pressures are practically constant in all of the larger arteries and that the diastolic is much nearer to the mean than is the systolic pressure The practical significance of these relations of the pressures to one another becomes apparent when it is recalled that at present there is no known way of directly determining the mean blood pressure in man

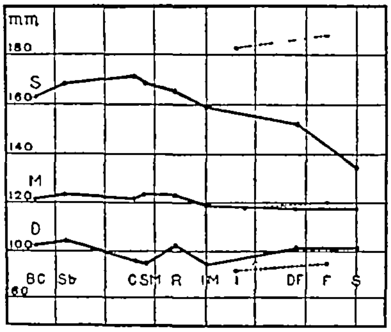

Fig 1—Aortico femoral system S M and D are the systolic, mean and diastolic end pressures, respectively The solid lines connect end pressures taken in side branches of the aortico-femoral trunk Broken lines connect pressures taken in the main trunk of the system B, C is the branchio-cephalic artery Sb, left subclavian C celiac axis, S M superior mesenteric R, left renal I M inferior mesenteric, I iliac D F deep femoral, F, femoral S saphenous (Dawson)

But it follows from the above-mentioned facts that the diastolic pressure is a much more accurate indicator of the mean than is the systolic

At least four methods have been proposed for determining the systolic pressure in man, namely 1 The method of obliteration,[4] compression or decompression of an artery until the pulse distal of the point of compression or decompression disappears or reappears, respectively 2 The method of von Frey,[5] submersion of the arm in mercury and measurement of the distance from the surface of the mercury of the place in the arm where the subjective pulsation is the most intense 3 The method of Gaertner,[6] the flushing of the finger tip, which previously has been made anemic, during decompression of the digital arteries 4 The method of von Recklinghausen,[7] the first abrupt increase in amplitude of pulsations transmitted from the artery, during its decompression, to the object compressing the artery

Many tests[8] have been made of the accuracy of estimations with the method of obliteration The results obtained are by no means uniform, but the discrepancies are probably largely due to the fact that investigators in many instances are not sufficiently well acquainted with the subject of hemodynamics, with the theory of the manometers used for the direct measurement of the blood pressure Furthermore, the peripheral pulse has been palpated, not recorded, in too small an artery There is no need of discussing here how these facts have influenced the results obtained by different investigators According to recent investigations it would appear that when the tests are made on the exposed arteries of animals the method of obliteration is found to be very accurate indeed[9]

In animals when the artery is covered by surrounding tissue the estimation varies somewhat with the thickness of the tissue and with the width of the compressing cuff But such animal experiments permit the assumption that fairly accurate estimations may be made in man With cuffs of sufficient width the error need not be more than —4 mm Hg[10]

In this connection I wish to call attention to the test of the method of Vierordt, recently published by Mummery,[11] who states that "the accuracy of the readings (of the Riva-Rocci apparatus) has previously been tested by observations on the cadaver, but this method of testing the instrument is very unsatisfactory and unreliable" He does not seem to know that tests of the method of Vierordt have been made on the living animal And in the statement that the Riva-Rocci "apparatus registers the maximum systolic pressure" it is evident that Mummery is not acquainted with the meaning of the terms used

Mummery's method of testing the instrument consists of making simultaneous readings with the ordinary mercury manometer in the right femoral artery and with the Riva-Rocci apparatus attached to the left thigh of a dog With certain exceptions, which he explains to his own satisfaction, he finds that the readings made with the two instruments correspond very well indeed He then implies that he has proved that the Riva-Rocci instrument registers the systolic pressure It is not stated how his mercury manometer was read, whether at the crest of its swing or at its mean position, in either case, but especially in the latter, the readings made would be very far from the true arterial systolic pressure Neither does Mummery state the width of the cuff used to apply the pressure to the thigh, nor does he seem to know that it is impossible to apply circular pressure to the thigh of the dog without having a large component of the pressure lost in dragging the cuff toward the apex of the cone These observations of Mummery are therefore valueless and misleading

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[3] Dawson The Lateral Blood Pressures at Different Points of the Arterial Tree Amer Jour of Physiol 1906 vol xv., p 244

[4] v Basch "Ueber die Messung des Blutdrucks am Menschen Ztschr f klin Med., 1881 vol. ii p 79

[5] Chir Beit. Fests. f. Benno Schmidt Leipsig 1896 ref. Sahli Lehrb d r klinischer Untersuchungsmethoden Second ed., 1899

[6] Gaertner "Ueber einen neuen Blutdruckmesser (Tonometer)" Wien klin Wochschr., 1899 No 25 p 696

[7] v Recklinghausen Ueber Blutdruckmessung beim Menschen, Arch. f. exp Path. u. Pharmak 1901, vol xlvi, p 78.

[8] Potain Determination experimentale de la valeur du sphygmomanometre, Arch. de Physiol, 1890, fifth series vol ii, p. 300

[9] Gumprecht Experimentelle und klinische Prüfung des Riva Roccischen Syphygmomanometers Zschr f. klin Med, 1900, vol xxxix, p 377

[10] Erlanger Proc. Amer Physiol. Soc. Dec. 1903 p 14 also A New Instrument for Determining the Minimum and Maximum Blood Pressures in Man," Johns Hopkins Hosp Rep 1904 vol xii, p 53

[11] Mummery "Comparison of Blood Pressure Readings Obtained Simultaneously With a Manometer and With a Sphygmomanometer Proc. Physiol. Soc., Jour of Physiol, 1905 vol xxxii p 23 also 'The Physiology and Treatment of Surgical Shock and Collapse Lancet, 1905 vol i, p 696

The accuracy of estimation made by the method of von Recklinghausen has been tested on the exposed artery of the dog, although not so carefully as is desirable The method seems to be very accurate Comparisons of estimations in man by the methods of von Recklinghausen and Vierordt indicate that with the latter method the estimations may be from 5 to 10 mm Hg too low[10] The estimations made with the method of von Frey are too subjective to allow of satisfactory testing

The method of Gaertner is open to the objection that the arteries of the fingers are probably small enough to participate directly in vasomotor changes[12] Therefore a rise of the general blood pressure, which in part is caused by constriction of the digital arteries, may be associated with a fall of pressure in the terminal phalanges That this does occur is practically demonstrated by the fact that cold, which usually causes peripheral constriction with consequent rise of the general blood pressure, seems to cause a fall of pressure as estimated by the method of Gaertner[13]

There are two methods by means of which the diastolic pressure may be estimated in man The older method, that of Marey, consists of determining the pressure under which the pulse will transmit oscillations of greatest amplitude to the object with which the pressure is being applied to the artery Within the past ten years many opinions have been expressed as to which pressure, mean or minimum, is determined by this method Within comparatively recent years, owing largely to the investigations of Howell and Brush,[12] the decision has been reached that the method of maximum oscillations determines the diastolic pressure There seems to be but one investigator, von Recklinghausen, who now maintains that maximum oscillations are obtained at a mean pressure[7] This opinion is based on the observation that if a tracing be made of the oscillations obtained from an artery while the pressure on it is slowly falling the largest oscillations will be obtained some time before an abrupt diminution in amplitude occurs In such a case von Recklinghausen assumes, rightly, I believe, that the pressure on the artery was diastolic when the abrupt diminution in amplitude was registered, and that the maximum oscillations, therefore, were obtained while the pressure on the artery was above the intra-arterial diastolic pressure. But it can readily be shown that if the pressure on the artery be allowed to fall somewhat more slowly than in von Reckinghausen's experiments the maximum oscillations will be followed immediately by the abrupt diminution in amplitude[10] The cause of the discrepancy which is seen when the pressure on the artery falls rapidly can not be discussed here Let it suffice to state that, under any circumstances, the diastolic pressure corresponds with the abrupt diminution in amplitude

The second method with which it has been proposed to determine the diastolic pressure in man depends on the observation that while gradually compressing an artery, at a certain pressure the pulse peripherally of the place of compression diminishes in amplitude Janeway,[14] who first noted this phenomenon, did not feel justified in concluding that it permitted of the estimation of the diastolic pressure He cautiously states that "the pressure to produce it must lie above the minimum pressure in the artery" Other investigators, among them Masing,[15] but particularly Strassberger[16] and Sahli,[17] maintain, on *a priori* grounds entirely, that the principle of Janeway gives diastolic pressures, but the proof is lacking that such is the case It has been noted by Strassberger, and the same fact is illustrated in the tracings reproduced by Sahli, that the amplitude of the pulse wave increases before the diminution in amplitude occurs Strassberger, therefore, estimates the diastolic pressure by noting the pressure at which the pulse waves of increasing amplitude first began to diminish, using for the compression of the artery the Riva-Rocci sphygmomanometer The changes in amplitude of the radial pulse are noted with the finger Sahli likewise employs the Riva-Rocci instrument to apply pressure to the brachial artery, but he records the changes in the radial pulse with the Jaquet sphygmochronograph. As stated above, it is assumed that the pressure exerted on the brachial artery is diastolic when the pulse diminishes in amplitude

It would be a relatively simple matter to test the accuracy of this assumption on the living animal, but, to my knowledge, no such tests have yet been made In the absence of such tests it becomes necessary to call attention to the fact that there are obviously two processes at work tending to alter the amplitude of the peripheral pulse while the artery is being compressed First, by some unknown factor tends to enlarge the pulse amplitude, second, by the pressure from without must constantly tend to diminish the amplitude of the peripheral pulse by diminishing the caliber of the artery It is true that the latter factor will not be great so long as the external pressure is less than the intra-arterial minimum, the great diminution in caliber will occur when the diastolic pressure is exceeded There is no justification for Sahli's assumption that the arteries suffer no lateral expansion with the advent of the pulse wave and that, therefore, the caliber of the artery is not diminished by external pressure until that pressure exceeds the diastolic

Since, then, there are two factors altering the amplitude of the peripheral pulse in opposite directions, any *a priori* conclusion as to the value of the pressure determined by the method of Janeway must necessarily be questionable It is true that comparisons have been made of estimations of the blood pressure determined by the methods of Marey and of Janeway But, unfortunately, the results obtained by two investigators do not agree Thus Janeway states that the pressure at which the pulse waves as recorded with the sphygmograph diminish in amplitude "always lies above the lower limit of maximal pulsation, as shown by the Hill-Barnard[14] sphygmometer" Whereas Brush[18] found that the diminution in the amplitude of the peripheral pulse, as determined by palpation, corresponds fairly closely with the diastolic pressure as determined with my instrument It is to be regretted that the latter investigator did not employ a more objective method of studying the variations in the peripheral pulse

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12. Howell and Brush Critical Note on Clinical Methods of Measuring Blood Pressure Trans. Mass. Med. Soc. June 12, 1901

13. Raab Münch. med. Wochschr 1905 No 50

14 Janeway Observations on the Estimation of Blood Pressure in Man New York Bull of Med. Sc. 1891 vol i p. 105

15 Masing Ueber das Verhalten des Blutdrucks der jungen und der bejahrten Menschen bei Muskelarbeit" Deuts Arch f Klin Med 1902 vol lxxiv p 273

16. Strassberger Ein Verfahren zur Messung des diastolischen Blutdrucks und seine Bedeutung für die [illegible] Z[illegible] r f Klin Med 1904 vol liv p. 373

17 Sahli Ueber das absolute S[illegible] ische Bedeutung Deuts Arch f k[illegible]

18 Brush Amer Med., July 15

The question now arises: Does the knowledge of either one of the determinable blood pressures (systolic and diastolic) suffice in physiologic and clinical observations or are the advantages which may be gained from the knowledge of both pressures so great as to demand their estimation in all cases?

There is no doubt that the diastolic pressure gives the better clue to the driving force of the blood stream, i. e., the geometric mean of the blood pressure. This is indicated by the fact that the diastolic pressure lies much nearer to the mean, and follows its variations much more accurately than does the systolic. When, therefore, it is desired to know the mean pressure approximately, the diastolic pressure should be determined. If, on the other hand, it is desired to know the strain to which the arteries are subjected, then must the systolic pressure be determined. But there are some reasons for believing that a change in the mean pressure may occur without affecting one or the other of the determinable pressure and, conversely, that the diastolic and systolic pressures may change without there being any corresponding change in the mean.[12] Also it can be shown that both the systolic and diastolic pressures must be known in such and similar cases in order that the nature of the change in the circulation may be determined.

In this connection, it was first suggested by the author[10] that, under more or less normal conditions, it should be possible to determine changes in the relative velocity of blood flow in the aorta, and the factors determining such changes, from a knowledge of the associated changes in the pulse pressure (the difference between the systolic and diastolic pressures), the blood pressure (diastolic) and the pulse rate. The argument, which was almost entirely *a priori*, was briefly as follows: In a constant circulatory system the heart will pump blood into the arteries until an arterial pressure is produced which is sufficiently great to force out of the arteries, against the peripheral resistance, an amount of blood equal to that which is thrown into the arteries. At the end of each cardiac cycle the pressure in the arteries will be at its lowest or diastolic level. With each cardiac systole the pressure in the root of the aorta will rise rapidly to its maximum or systolic value. Other things being equal, the difference between the systolic and diastolic pressures, i. e., the pulse pressure, should vary with the amount of blood thrown out by the heart with each beat. When the mean blood pressure is constant an equivalent of the amount of blood which is thrown out by the heart during systole must escape from the arteries into the veins during diastole. In the pulse pressure, therefore, we have a measure of the systolic output of the heart. This systolic output, or rather the pulse pressure caused by it, when multiplied by the pulse rate per minute should give the relative velocity of blood flow in the aorta. Since it has been shown that the methods employed for estimating the blood pressures in the brachial artery of man determine the lateral pulse pressure in the aorta,[8] we have at hand the means of determining the relative velocity of blood flow in man. It is necessary to bear in mind in this connection that there are many factors whose values are still unknown, which may operate to vitiate the value of the pulse pressure as an index to the relative velocity of flow. Among such factors the following may be found to be of importance: the capacity of the arterial system, the rigidity of the arterial walls which may vary with the arterial pressure and degenerative changes, the rate of systolic output, the superposition of secondary on primary waves, etc.

Sahli[17] discussed this phase of the blood-pressure problem and independently arrived at the conclusion, in which he was opposed by Strassberger,[20] that the pulse pressure is valueless as an index to the velocity of blood flow. It should be stated that Sahli seems to have had in mind the possible value of the pulse pressure in pathologic conditions only, and, in the absence of experimental data, his conclusion in this regard seems to be justifiable. Nevertheless, it is possible to collect from the physiologic literature facts which indicate that a distinct association exists between pulse pressure and systolic output. Therefore, it seems reasonable to maintain that in physiologic conditions, at least, the products of the pulse rate by the pulse pressure in the same subject vary with the velocity of blood flow.

By way of illustration of the value of this assumption a few observations made in man will be given.[19] An average of many observations in man shows that with the assumption of the erect from the recumbent posture the systolic pressure suffers practically no alteration, whereas the diastolic pressure rises; the pulse pressure, therefore, becomes smaller. The pulse rate is faster with the individual in the standing position, and it results that the product of the pulse rate by the pulse pressure is practically the same in both positions. It certainly seems probable that the compensatory mechanism would strive to maintain the same velocity of blood flow when the body is in two normal positions, and the fact that the product of the pulse rate by the pulse pressure is identical in the two positions of the body may be taken as proof that the compensation is perfect. It should be noted in connection with this experiment that if only systolic pressure estimations had been made, the erroneous conclusion would have been reached that the blood pressure is not changed by alterations in the position of the body.

As a second illustration, we may choose the effect on the pressures of immersing the body in the erect position in warm and in cold water. When the body is in warm water, the diastolic pressure is high, but, the systolic pressure being relatively higher than the diastolic, the pulse pressure is large. At the same time, the pulse rate may be more rapid than that of the normal standing position. The product of the pulse rate by the pulse pressure is, therefore, remarkably large, indicating a high velocity of blood flow. When the body is immersed in cold water, the diastolic pressure, as in the former case, is high, but since the systolic pressure does not increase to the same extent as the diastolic, the pulse pressure is relatively small. The pulse rate may be slow. The product of the pulse pressure by the pulse rate is, therefore, small, indicating a low velocity of blood flow. It will be noted that in both parts of this experiment the blood pressure was increased over the normal by immersion in water. But the effect of the warm water was, as we should expect, to increase the velocity of blood flow, whereas the effect of the cold water was to diminish the velocity of flow.

It should not be necessary to make any further comments on the value of simultaneous estimations of the systolic and diastolic pressures. Their values, or, rather, the necessity of making them in all cases, can be read in the brief accounts of the experiments quoted above.

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[10] Erlanger and Hooker: Proc. Amer. Physiol. Soc. Dec. 1903, p. 15; also An Experimental Study of Blood Pressure and Pulse Pressure in Man, Johns Hopkins Hosp. Rep., 1904, vol. xii, p. 145.

[20] Strassberger: Ueber Blutdruck, Gefässtonus und Herzarbeit bei Wasserbäden verschiedener Temperature, Deuts. Arch. f. klin. Med., 1905, vol. lxxxii, p. 459.

The pulse pressure may prove to be of value in still another connection. Mall and Welch,[21] in an experimental study of infarct formation in the intestine, have shown that diapedesis of the red blood corpuscles occurs when the blood flow through an artery is cut down to such a point that lateral pulsations of the walls of the peripheral arteries can no longer be seen. In the same connection, Hamel[22] and Kronecker[23] have shown that the edema, which is so apt to develop in artificially perfused organs, may be largely obviated by perfusing with a fluid driven by a pulsating pressure. The absence of pulsation, therefore, seems to favor extravasation of blood through the blood vessels into the tissues.

It has been shown that this property of the pulse pressure is probably of considerable significance in man. For example, the amount and composition of the urine seems to vary with the pulse pressure, and, in a case of orthostatic albuminuria, the output of albumin was found to bear a very distinct relation to the magnitude of the pulse pressure, albumin appearing or increasing in amount in association with diminution of the pulse pressure and diminishing or disappearing with increase of the pulse pressure.[10]

Before leaving the subject of blood pressure, attention should be directed to the relation which it bears to Cheyne-Stokes respiration, since an important contribution to this association has recently been made by Eyster.[24] This investigator recognized at least two forms of Cheyne-Stokes respiration, one associated with increased intracranial tension, the other occurring in association with arteriosclerosis, myocarditis, nephritis, etc.

In regard to the first form of Cheyne-Stokes respiration, it has long been known from experiments on animals that, when the intracranial tension is high, the blood pressure is apt to vary in the form of long regular waves, the so-called Traube-Hering waves. It has also been noted that at such times the respirations often become periodic. Hill[25] noted that the respirations, i. e., the periods of hyperpnea, occur during the ascending limbs of the Traube-Hering waves, the apneic periods while the pressure is falling. In one clinical case Hill was able to show by means of the plethysmograph that dilation of the vessels of the arm and hand occurs during the period of apnea and constriction with dyspnea. In other words, he has obtained rather indirect evidence that in man the same changes in blood pressure are associated with periodic respirations as in the dog.

Cushing[26] first showed clearly that when, in the dog, the intracranial pressure exceeds the blood pressure, there seems to occur an increase in the activity of the vasoconstrictor center and that this results in a rise of the blood pressure, until, in favorable cases, it exceeds the intracranial pressure, when the brain, which had previously been anemic, receives a supply of blood. In certain cases this increased activity of the vasoconstrictor center seems to endure for but a relatively short period, with its fatigue, perhaps, the blood pressure falls, the brain again becomes anemic, and again the anemia stimulates the vasoconstrictor center. In this way the periodic waves of blood pressure seem to be produced. When, with the fall of blood pressure the brain becomes anemic, the respirations cease, they begin again when the brain receives blood. It would, therefore, appear that the periodic respiration seen in conditions of increased intracranial tension results from these alternating periods of ischemia and flushing of the brain. But the conditions are not so simple as stated. Eyster[24] points out that it is necessary to take into account the general irritability of the respiratory center. This phase of the question does not concern us here. Cushing was able to show in two cases of increased intracranial tension with Cheyne-Stokes respiration in man that the periods of hyperpnea are coincident with rises of the systolic pressure, the apneic periods, with falls.[27]

These determinations can not be considered conclusive, since we have seen that the systolic pressure may vary independently of the mean and diastolic pressures. Eyster has demonstrated beyond doubt, however, that in man a rise of blood pressure precedes, or is coincident with, the beginning of the period of hyperpnea. The method employed by Eyster for this purpose deserves a word of mention. Using the author's sphygmomanometer, Eyster first determined the systolic and diastolic pressure. The instrument was then set at a pressure midway between the determined pressures and a record was made on a revolving drum of the pulsations obtained in this way. Such pulsations are, of course, intermediate in size between those obtained at systolic and diastolic pressure. It was stated above that maximum oscillations are obtained at diastolic pressure. If, therefore, the pressure in the artery should rise, the oscillations would increase in amplitude, since the diastolic pressure would then be closer to the pressure in the instrument, and, *vice versa,* should the diastolic pressure fall, the recorded oscillations would diminish in amplitude, since the diastolic pressure would then have receded from the pressure at which the instrument had been set. This method of studying oscillations in the blood pressure, which are too rapid to be followed by methods generally employed, was first used by Mosso[28] and later by myself.[29]

It was also with the aid of this method that Eyster was enabled to recognize a second type of Cheyne-Stokes respiration associated with periodic changes in the blood pressure. He found that when Cheyne-Stokes respiration is met with in other conditions then increased intracranial tension, the hyperpnea occurs while the blood pressure is falling. Eyster does not attempt to suggest an explanation of this association, but it is implied that there exists a permanently low state of irritability of the respiratory center and that the center, therefore, requires an abnormally strong stimulus to arouse it into activity. This strong stimulus presumably is supplied by the accumulation of waste products in the center when, through the fall of the blood pressure, the irrigation of the center becomes insufficient. This inference is supported by the fact that carbon dioxid administered toward the end of the period of hyperpnea, has, in one case of this type of Cheyne-Stokes respiration, promptly abolished any tendency to apnea [30]

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[21] Mall and Welch (Quoted by Welch) "Thrombosis and Embolism. Allbutt's System of Medicine," 1899, p. 254.

[22] Hamel: Die Bedeutung des Pulses für den Blutstrom," Ztschr. f. Biol., 1889, vol. xxv, p. 474.

[23] Kronecker: Importanza del Polso per la Circolazione del Sangue, Atti della R. Acc. dei Lincei, 1889, p. 270, ref. Centbl. f. Physiol.

[24] Eyster: To appear in Jour. of Exp. Med.

[25] Hill: Cerebral Circulation," Lond., 1896.

[26] Cushing: Concerning a Definite Regulatory Mechanism of the Vasomotor and Center Which Controls Blood Pressure During Cerebral Compression, Johns Hopkins Hosp. Bull., 1901, vol. xii, p. 290.

[27] Cushing: The Blood Pressure Reaction of Acute Cerebral Compression, Amer. Jour. of Med. Sc., 1903, vol. cxxv, p. 1017.

[28] Mosso: Sphygmomanometre pour mesurer le pression du sang chez l'homme," Arch. It. de Biol., 1895, vol. xxiii.

[29] Erlanger: The Physiology of [illegible] loc[illegible] Mammals With Especial Reference to the Cau[illegible] [illegible] [illegible]rease," Jour. of Exp. Med., 1905, vol. vii, p.

PHYSIOLOGY OF THE HEART

Within recent years many new researches into the cause of the heart beat have been undertaken Indeed, this subject seems to have been attacked by the physiologist with renewed vigor

One of the most remarkable phenomena which this activity has brought to light is the astounding longevity of the mammalian heart after the death of the organism. To Martin belongs the credit of having first demonstrated the fact that the heart of the dog may be kept beating if the coronary circulation be maintained by driving defibrinated blood through the aorta toward the heart [31] In these experiments the blood was aerated by passage through the animal's lungs Some years later Langendorff simplified the process somewhat in that the blood was aërated by exposure to an atmosphere of pure oxygen instead of being passed through the lungs [32] Still more recently, it was discovered that, as was known to be the case with the cold-blooded heart, the salts of the blood, not its complex constituents, are of prime importance in originating and maintaining the beat of the mammalian heart.[33] It was found that a solution containing sodium chlorid, potassium chlorid, calcium chlorid, approximately in the proportions in which they occur in the blood, when perfused through the isolated heart, will cause it to beat. In 1901, Locke determined the solution best suited to prolonged activity of the isolated heart [34] Such a solution contains, beside the above-mentioned salts, sodium bicarbonate, dextrose and oxygen With this solution Locke has recently succeeded in maintaining the beat of the rabbit's heart, with some interruptions, for five days,[35] and other investigators have succeeded in reviving the hearts of mammals, including man, many hours after death of the organism Usually in these latter experiments the dead animal or the excised heart is put on ice until the attempt is made to revive the heart by artificial perfusion of the coronary system In this way Kuliabko[36] has revived a part of the heart seven days after the death of the organism The monkey's heart has been revived almost fifty-four hours after death [37] It has been found possible to revive the hearts of children dead of disease Thus Kuliabko succeeded in causing the heart of a child to beat twenty hours after death from pneumonia [36]

It is interesting to note that the pioneers in this field of research entered on experiments with fear and anxiety, the preparations were made with almost funereal solemnity Now these experiments are among the easiest the physiologist has to perform As an example of this it may be stated that one experimentor,[37] instead of making all preliminary dissections on the living animal, with the confidence born of experience, boldly kills the animal, eviscerates it, dissects out the cardiac nerves, and, then only, begins to perfuse the heart.

The only difficulty experienced in reviving the mammalian heart consists in the tendency which it sometimes displays to go into so-called fibrillary contractions instead of beginning to beat coördinately No satisfactory explanation of the cause of this phenomenon has yet been suggested Fibrillation, once begun, is apt to persist with the greatest of obstinacy Indeed, not so many years ago, some investigators went so far as to deny the possibility of reëstablishing coordinated contractions in a ventricle which has once fibrillated. Recently Hering discovered that if the fibrillating heart be brought to rest by perfusing it for a short while with a 1 per cent. solution of potassium chlorid, on subsequent perfusion with Ringer's solution, the heart will beat coordinately [38] In the same connection it has been shown by Seligmann that camphor will cause a fibrillating heart to beat coordinately [39] After the injection of camphor, strong stimulation of the ventricles may cause them to fibrillate, but this fibrillation always ceases with the cessation of the stimulation,[40] whereas, in the absence of camphor, the fibrillation usually continues until all movements of the heart cease. It should be added, however, that the last investigator in this field maintains that camphor has absolutely no influence over fibrillary contractions [41]

During the last few years the controversy between the neurogenists and the myogenists has been waged with renewed vigor, and consequently many facts have been gathered, some of which favor the view that the mechanism which determines the beat of the heart is nervous, others, the view that the impulse which causes the heart to beat arises in, and is conducted through, the myocardium. This controversy has recently been reviewed by Howell with his characteristic clearness [42] Only one phase of this question, namely, that dealing with the path of conduction of impulses from auricles to ventricles in the mammalian heart will, therefore, be considered here This subject has been chosen for consideration, because it has served to elucidate some hitherto obscure pathologic phenomena noted in the human being

The theory of myogenic origin and muscular conduction of the impulse which causes the heart to beat assumes that the impulse arises in the musculature in the region of the mouths of the great veins and is transmitted from this place through muscle to the arterial end of the heart The successive regions of the heart, therefore, contract from above downward

Thus, as is well known, there is a perceptible interval between the contraction of the auricles and the contraction of the ventricles Some evidence has been obtained that in the mammalian heart the impulse arises in the region which lies between the mouths of the two venæ cavæ [43] At least this is the only region the warming or cooling of which alters the rate of the whole heart[44] From this region, therefore, the impulse must spread through the auricles into the ventricles If this impulse spreads through muscle, then there must be a muscular connection between auricles and ventricles

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[30] Pembrey Beddard and French Observations on Two Cases of Cheyne-Stokes Respiration Proc. Physiol Soc. Jour of Physiol 1906 vol. xxxiv p 6

[31] Martin A New Method of Studying the Mammalian Heart, Stud. from the Biol Lab., Johns Hopkins Univ 1882 vol ii p 119

[32] Langendorff Untersuchungen am überlebenden Säugethier herzen Pflüg Arch 1895 vol lxi p 291

[33] Rusch Experimentelle Studien über die Ernährung des isolirten Säugethierherzens" Pflüg Arch 1898 vol lxxiii p 535

[34] Locke Die Wirkung der Metalle des Blutplasmas und verschiedener Zucker a. d. isolierten Säugethierherz," Centbl f. Physiol 1901 vol xv p 490

[35] Locke and Rosenheim Notiz über die Ueberlebensdauer des isolierten Säugethierherzens Centbl. f. Physiol., 1905 vol xix, p. 737

[36] Kuliabko 'Weitere Studien über die Wiederbelebung des Herzens," Pflüg Arch., 1903 vol xcvii, p. 539

[37] Hering Über die Wirksamkeit der Nerven auf dem Tode wiederbelebte Säugethierherz," Pflüg. Arch., 1903 vol xcix, p. 245

[38] Hering Ueber die Wirksamkeit des Accelerans auf die von den Vorhöfen abgetrennten Kammern isolirter Säugethierherzen," Centbl. f. Physiol 1903 vol. xvii p 1

[39] Seligmann Zur Kreislaufswirkung des Camphers, Arch. f. exp Path u. Pharmak., 1905 vol lii, p 333

[40] Gottlieb Zur Herzwirkung des Kamphers" Ztschr f. exp Path. u Therap 1905 vol ii p 385

[41] Winterberg Ueber Herzflimmern und seine Beeinflussung durch Kampher Ztsch. f exp Path. u. Therap

[42] Howell Harvey Lecture, 'The Cause of the Heart Beat" The Journal A. M. A., June 2 and 9 1906 pages 1665 and 1749

[43] McWilliam 'The Rhythm of the Mammalian Heart, Jour of Physiol 1888 vol ix, p 167

The existence of such a connection was for many years denied by anatomists and by some physiologists In 1893 Kent[45] stated that such a connection exists, although he did not exactly localize it. Indeed, it has been said that Kent's methods did not suffice to demonstrate the presence of muscle fibers[46] In the same year His, Jr,[47] exactly localized a definite muscular bundle connecting the septum of the auricles with the septum of the ventricles Practically no notice was taken of this work until 1904, when the existence of this bundle was confirmed and its exact anatomy described by Retzer,[46] Braeunig[48] and Humblet[49] In 1905, Tawara[50] described its minute anatomy This investigator believes that the auriculoventricular bundle of His consists of a tissue which differs microscopically from the rest of the heart muscle. He thinks it is composed of so-called Purkinji fibers and that it is a part of the Purkinji system of fibers which ramifies through the heart muscle In a general way it may be said that the auriculoventricular bundle begins in the septum of the auricles immediately below the foramen ovale and from this place passes downward and forward through the auriculoventricular junction where it comes into close relation with the auriculoventricular valves Arrived in the septum of the ventricles, it courses downward and forward over the upper edge of the muscular septum between it and the membranous septum According to Tawara, it here divides, one part passing down the right side of the septum, the other down the left side According to Retzer, the dimensions of the auriculoventricular bundle in man are 18 mm. in length, 2 5 mm in breadth and 1 5 mm in thickness

If this muscular bundle constitutes the functional connection between auricles and ventricles, destruction of it should block the passage of the auricular impulse into the ventricles Whether or not the ventricles will then stop beating will depend on the degree to which their inherent rhythmicity is developed If, as is the case with the cold-blooded heart, they are not spontaneously rhythmical under what might be termed normal conditions, then they should cease to beat when complete block is produced, but if they are spontaneously rhythmical, they should continue to beat, but with a rhythm totally independent of that of the auricles It might here be stated that it has long been known that the mammalian ventricles possess the property of spontaneous rhythmicity This was first demonstrated by the experiments of Wooldridge,[51] and subsequently by those of other investigators,[52] in which the functional connection between auricles and ventricles was severed by crushing all of the tissue in the auriculoventricular junction.[53] Under these circumstances, the ventricles continue to beat, but with a rate which is much slower than that of the auricles and with a totally independent rhythm That the same phenomenon may be elicited by destruction of the auriculoventricular bundle alone was first demonstrated by His, Jr, in 1895[54] In a very brief report of his experiments, His states that section of the auriculoventricular bundle in rabbits causes the ventricles to beat indpendently of, and much more slowly than, the auricles

His's observations did not receive the recognition they deserved, probably owing to the fact that only a preliminary report of them was made The recent anatomic work on the auriculoventricular bundle has served to stimulate further investigations into the physiology of the bundle In 1904, Humblet repeated His's experiment on the excised perfused heart of the dog and apparently obtained the same result.[49] In a much more convincing way Hering, in 1905, showed that section of the auriculoventricular bundle causes complete independence of the auricles and ventricles[55] In these experiments, as in those of Humblet's, the isolated perfused heart was employed

My experiments on heart block in the dog were performed simultaneously with those of Hering[56] The method employed differed from that of other investigators in that, instead of cutting the bundle in the perfused heart, it was compressed in a specially devised clamp with the heart preserving its normal relations to the organism

The method used for compressing the auriculoventricular bundle can not be described here With gradual compression of this bundle the following phenomena may be noted First, may be seen a slight increase in the interval between the beginning of an auricular and the beginning of its independent ventricular contraction This, then, is the first sign of heart block It has been described in the human being by Weckebach,[57] Mackenzie[58] and Rihl[59] With further clamping a degree of compression may be reached in which this interval—the intersystolic period—gradually increases in length with successive beats until eventually the ventricles fail to respond to one of the auricular impulses Following this ventricular silence, the intersystolic period is short, but it immediately begins to lengthen again until another ventricular beat is dropped In this way states may be produced in which a ventricular beat may be dropped quite regularly in 10, 9 or 8, etc, auricular beats This condition too, has been seen in the human being With further clamping, more advanced stages of partial block may be obtained, stages in which only every other, or every third, or every fourth auricular beat may stimulate the ventricles, giving rise to what are generally termed 2 1, 3 1, 4 1, etc, rhythms, respectively Usually, however, the ventricular period, when the ventricles are beating independently of the auricles, is shorter than the time occupied by four auricular beats, so that, should the third auricular beat fail to stimulate the ventricles, the latter may contract spontaneously It is evident, therefore, that the ventricles may beat independently of the auricles, although the block is not actually complete This state has been termed relative complete block [60] Finally, when the pressure on the auriculoventricular bundle becomes such that the auricular impulse fails to pass the obstruction, the block becomes absolutely complete In both forms of complete block the ventricles beat more slowly than the auricles and independently of them This state of affairs is seen in advanced stages of Stokes-Adams disease

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[44] Adam Experimentelle Untersuchungen über den Ausgangspunkt der automatischen Herzreize beim Warmblüter," Pflüg Arch. 1906 vol cxi p. 607

[45] Kent Researches on the Structure and Function of the Mammalian Heart, Jour of Physiol 1893 vol xiv p. 233

[46] Retzer "Ueber die musculöse Verbindung zwischen vorhof und ventrikel les Säugethierherzens, Arch. f Anat. 1904 p. 1

[47] His Jr Arbeiten aus der med. Klinik zu Leipzig 1903 ref Retzer (46)

[48] Braeunig Ueber muculöse Verbindungen zwischen Vorkemmer und Kammer bei verschiedenen Wirbelthierherzen Arch. f Physiol 1904 suppl 1

[49] Humblet Le Faiscean inter auriculo-ventriculaire constitue le lien physiologique entre les oriellettes et les ventricules du cœur du chien Arch inter d physiol 1904 vol i p 278 also Allorhythm cardiaque par section du faisceau de His" Ibid, 1906 vol iii p 330

[50] Tawara Die Topographie und Histologie der Brückenfasern Centbl. f Physiol., 1905, vol xix, pp 70 and 298

[51] Wooldridge Ueber die Function der Kammernerven des Säugethierherzens" Arch f Physiol., 1883 p 522.

[52] Tigersredt "Ueber die Bedutung der Vorhöfe für die Rhythmik der Ventrikel des Saugethierzens, Arch. f. Physiol., 1884 p 407

[53] Krehl and Romberg 'Ueber die Bedeutung des Herzmuskels und der Herzganglien für die Herzthätigkeit des Säugethierzens Arch. f. exp Path u Pharmak. 1892, vol xxx p 49

[54] His, Jr Dritte intern Physiol Congress in Bern, Centbl f Physiol., 1895 vol ix, p 469

[55] Hering Ueber die Erregungsleitung zwischen Vorkammer und Kammer des Säugethierherzens," Pflüg. Arch 1905 vol. cvii, p. 97

[56] Erlanger Vorläufige Mitteilung über die Physiologie des Herzblocks in Säugethieren" Centbl f Physiol., 1905 vol xix p. 9 also "Physiology of Heart Block in Mammals With Especial Reference to the Causation of Stokes Adams Disease Jour Exp Med 1906 Vol viii p 8

[57] Wenckebach Die Arhythmie als Ausdurck bestimmter Functionsstörungen des Herzens" Leipsic, 1903.

[58] MacKenzie New Methods of Studying Affections of the Heart" Brit Med Jour March and April

[59] Rihl "Analyse von fünf Fällen v [illegible] ngen" Zeits f exp Path u Therap., 1905-6

When the block is produced slowly, in the manner described above, the ventricles begin their independent beats with a perfectly constant rate at the moment the block becomes complete, but when the block is established more or less suddenly the ventricles may cease beating for a variable interval of time—it may be as long as seventy seconds—when they may begin to beat, slowly at first, but with a gradually increasing rate until that usually seen in complete heart block obtains [35, 60] Naturally, the normal rate of the auricles is not affected during such periods of stoppage of the ventricles, except, secondarily, through the ischemia resulting from the cessation of the circulation It is assumed that the ventricles stop beating in this experiment, when they are suddenly removed from the propelling action of the auricular impulses, because the inherent rhythmicity of the ventricles is dormant while the ventricles are being driven by the auricles, but when the auricular impulses suddenly fail to reach the ventricles the latter cease beating until their inherent rhythmicity develops to the stage at which the ventricles will begin to beat spontaneously

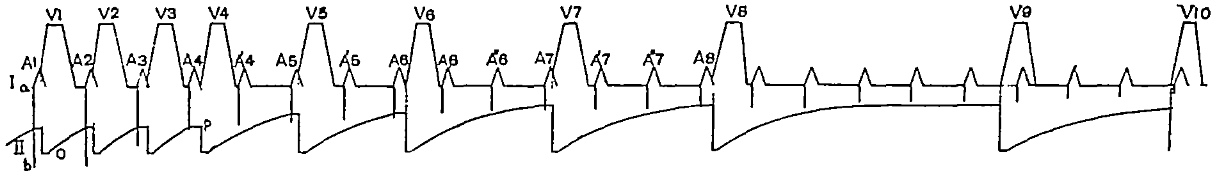

Fig 2.—Diagram to illustrate the genesis of heart block For description see text.

These facts relating to heart block, as well as others to be given below, can best be explained by fitting them into a theory which may be represented diagrammatically as in Figure 2 It might be added that this theory is supported by many facts which can not be given here [61] The upper line of the diagram represents the contractions of the auricles (A1, A2, etc) and ventricles (V1, V2 etc), the lower line the changes in irritability of the ventricles the line 0 marking the non-irritable level As is well known, the irritability of heart muscle falls to zero, that is, the tissue will not respond to stimuli of any strength, during the phase of contraction During relaxation the irritability returns, increasing presumably rapidly at first and then more and more slowly until the tissue again contracts With each contraction of the auricles a wave of excitation descends into the ventricles, this impulse is represented diagrammatically by the lines marked a b, the lengths of which have been chosen so as to vary with the strengths of the impulses which presumably reach the ventricles It is assumed that the ventricles will contract when the auricular impulse as represented by this line acts as an efficient stimulus, i e, when it intersects the curve of irritability of the ventricles

After completion of the second ventricular cycle in the diagram, the clamp on the auriculoventricular bundle is gradually tightened With this the impulse diminishes in strength, but it is still efficient. But in the fourth cycle the line representing the strength of the auricular impulse fails to meet the curve of irritability of the ventricles The ventricles, therefore, fail to contract and their irritability, instead of falling to zero, continues to increase The next auricular impulse is no stronger than was the preceding one, but at the time of its advent in the ventricles their irritability has increased to such a level that the impulse is efficient and the ventricles respond with contraction. At this stage we have a partial block of the 2 1 type In the same way 3 1 and higher rhythms may be obtained The block becomes relatively complete when the auricular impulses fail to stimulate the ventricles before the ventricles begin to beat as a result of the development of their inherent rhythmical power, and the block becomes absolute when the auricular impulse fails to get into the ventricles

It has been shown experimentally that if, while the block is partial or relatively complete, the rate of the auricles be slowed by any means (e g, by stimulation of the vagus nerve), the block may become less complete that if the ventricle rate be increased during partial block (by stimulation of the accelerator nerve, for example), the block may become more complete Indeed, it may actually become complete, and in such a case the ventricles may cease beating until their dormant rhythmicity awakens [60, 61] A glance at the diaphragm will serve to make clear the probable mechanism of these phenomena It is justifiable to assume that the strength of the auricular impulses varies inversely as the auricular rate It is conceivable, therefore, that if the rate of the auricles be sufficiently increased while the rhythm is, for example, 2 1, the auricular impulses thus weakened may fall short of being efficient stimuli The rhythm then may become 3 1 or the block may become complete Naturally, diminishing the auricular rate will have the opposite effect

Since it has been found possible to produce heart block in other ways than by destruction of all the tissue in the auriculoventricular junction, i e, by destroying the auriculoventricular bundle only, the way has been opened to the direct solution of the question

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[60] Erlanger and Hirschfelder "Further Studies on the Physiology of Heart Block in Mammals," Amer Jour of Physiol., 1903 vol xv p. 153.

[61] Erlanger The Effects of Extra Systoles on the Dog's Heart and on Strips of Terrapin's Ventricle in the Various Stages of Block" Amer Jour of Physiol., 1906 vol xvi p 160

Do the vagus and accelerator nerves act on both the auricles and the ventricles? In relation to this problem it has been found that in complete heart block produced by destruction of the auriculoventricular bundle the normal influence of the vagus over the auricles is preserved, whereas, in the dog, at least, its influence over the ventricles is lost or almost completely lost [56, 62] Thus stimulation of the vagus in such a case may stop the auricles, but the ventricles will continue to beat with practically unchanged rate It follows from this observation, and others which can not be given here, that the prolonged[60] stoppage of the ventricles which may be obtained by stimulation of the vagus in the normal animal must be due to the fact that the vagus stops the auricles, and the ventricles, therefore, stop until their inherent rhythmicity develops to the point at which they begin to beat spontaneously [60]

It might be added that the vagus likewise does not act on the ventricles of man, since in cases of complete heart block atropin does not increase the ventricular rate, although it exercises the usual accelerating effect over the auricles It has long been known that in cases of Stokes-Adams disease (heart block) the pulse rate is remarkably stable For example, changes in posture have not the usual effect on the pulse rate [29] This observation is explained by the fact that in such cases the ventricles are not affected by vagus influences

The accelerator nerves act directly on auricles and ventricles stimulation of these nerves during complete heart block causes independent accelerations of auricles and ventricles [56, 60, 62] And direct evidence obtained from a case of heart block indicates that in man, too, the accelerators act on auricles and ventricles [29]

From these observations it follows that simultaneous stimulation of inhibitory and accelerator fibers might slow the auricles while accelerating the ventricles This actually does occur in the dog, and there seems to be some grounds for believing that it would likewise occur in man The evidence for this opinion follows In advanced cases of Stokes-Adams disease with complete heart block, it has been observed that mild syncopal attacks may occur in association with Cheyne-Stokes respiration [29 63] This has also been seen in an instance of complete heart block experimentally produced in the dog [64] In such cases in association with the onset of the period of hyperpnea, acceleration of the auricles and marked retardation of the ventricles may occur In the present state of our knowledge, these changes in the rates of auricles and ventricles can be explained only on the assumption that they are caused by a simultaneous diminution in the tone of the vagus and accelerator centers in the medulla The auricles, which are influenced mainly by the vagus, would then beat faster, whereas the ventricles, which are influenced by the accelerators only, would beat more slowly

There seems to be still another way in which the syncopal attacks of Stokes-Adams disease might be caused, namely, by a sudden increase of the auricular rate while the block is partial It was stated above that in the dog the block may under such circumstances become complete and that the ventricles may then stop beating until their inherent rhythmicity develops It is this marked slowing of the ventricles which directly causes the syncopal attacks [29 65]

Thus far reference has been made only to heart block resulting from obstruction to the passage of impulses from auricles to ventricles It is necessary to bear in mind the possibility of there being other forms of heart block, although it is my opinion that the term heart block should not be applied to any condition other than functional insufficiency of the auriculoventricular bundle

1 It is conceivable that under certain circumstances the cardiac impulse, through disease of the auricles or of the great veins, may be so feeble as always to constitute a subminimal stimulus for the ventricles Under such circumstances, the auricles and ventricles would beat independently of one another I know of no instance of heart block clearly due to such disturbance

2 On the other hand, it is conceivable that through disease or drugs the irritability of the ventricles may be reduced to such an extent that auricular impulses of presumably normal strength may fail to act as efficient stimuli to the ventricles According to Straub, the administration of antiarin, an alkaloid of the digitalis group, to the frog may be followed by the development of a partial block [66] Straub has brought forward evidence which seems to indicate that in such cases the antiarin acts by diminishing the irritability of the heart muscle This fact is of very great interest in that it may serve to explain the observation recently made by MacKenzie that in man the administration of digitalis may result in the development of a partial block, apparently at the auriculoventricular junction [58] In the same connection Hering has shown that the apparent block following the administration of strychnia can likewise be explained only upon the assumption that the irritability of the ventricular muscle is reduced by the drug [67]

Since allorhythmia and complete independence of the beats of auricles and ventricles apparently may be brought on in several ways, the question suggests itself What is the cause of heart block in man? A definite answer to this query can not be given in the present state of our knowledge The only justifiable answer is that disease of the auriculoventricular bundle has been found in all cases, now four in number, of Stokes-Adams disease (heart block) which have come to autopsy since it has been proved that the auriculoventricular bundle constitutes the only physiologic nexus between auricles and ventricles [68]

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[62] Hering Ueber die unmittelbare Wirkung des Accelerans und Vagus auf automatisch schlagende Abschnitte des Säugethierherzens Pflüg Arch 1905 vol cviii p. 281 Hering here does not refer to the cause of stoppage of the ventricles seen on vagus stimulation in the normal heart

[63] His, Jr Ein Fall von Adams Stokes'scher Krankheit mit ungleichzeitigem Schlagen der Vorhöfe und Herzkammern (Herzblock) Deuts. Arch f klin Med 1889 vol lxiv p 316

[64] Cullen and Erlanger Experimental Heart Block." Read before the Johns Hopkins Med. Soc April 23 1906

[65] Webster Cardiac Arrhythmia in Relation to Cerebral Anemia and Epileptiform Crises, Glasgow Hosp. Rep 1900 vol iii p 413

[66] Straub Ueber Wirkung des Antiarins am ausgeschnittenen suspendirten Froschherzen Arch. f. exp Path u Pharm 1901 p 366

[67] Hering Centbl f Physiol., 1901 vol xv p 193

[68] Stengel Fatal Case of Stokes Adams Disease With Autopsy Amer Jour Med. Sc. 1905 vol cxxx p 1083 Also Hay The Pathology of Bradycardia Brit. Med Jour Oct 21 1905 p 1034 Also Schmoll "Adams Stokes Disease" The Journal A M A vol xlvi p 361 Also Jellick Cooper and Ophüls "The Adams Stokes Syndrome and the Bundle of His The Journal A M A., March 31 1906 p 935

Auto Saves Lives.—With the advent of the motor in a country village and its appearance on its highways and byways, the horses will get over their restiveness and the antipathy which some farmers have against automobiles will quickly disappear The motor car that takes the [illegible] ian [illegible] bedside of the farmer's wife in half the t[illegible] and by promptness enables him to save [illegible] sidered a thing of evil —*Automc*

AN ANALYSIS OF EIGHT HUNDRED AND EIGHT CASES OF CHOREA, WITH SPECIAL REFERENCE TO THE CARDIO-VASCULAR MANIFESTATIONS *

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Some time ago Dr Thomas suggested to me that it might be of interest to analyze the records of the cases of chorea which had been treated in his department in the Johns Hopkins Hospital Dispensary with reference to the cardio-vascular manifestations For the most part these cases have been rather carefully studied, each patient, as far as possible, having been sent to the medical department for special notes on the heart Last fall, accordingly, I undertook this task, which was particularly interesting to me in view of the fact that many of the special notes had been made by myself I have added to these cases those which have been treated in the hospital wards during the same period, the majority of which I have also been able to study

My plan was somewhat similar to that which was adopted a few years ago in the study of the cardio-vascular complications and sequels of typhoid fever It involved 1 A study of the records of these cases while under treatment 2 A study of the pathological observations in the fatal cases 3 An investigation into the present condition of all old patients with whom it was possible to enter into communication

The amount of time required to go over so large a number of cases made it impossible for me to finish this whole undertaking in time for this session That which I present consists of a brief summary of the first part of the work, namely, a study of the records of 808 cases of chorea treated in the Johns Hopkins Hospital and Dispensary, with special reference to the condition of heart and vessels

Number of Cases—The material amounted to 808 cases of which 698 were treated in the dispensary and 110 in the wards of the hospital

Race—Of these cases, 783, or 96 9 per cent, were white, 25, or 3 per cent only, were colored As the proportion of colored patients treated for all diseases in the medical department of the hospital and dispensary amounts to about 12 per cent, it may be seen that these figures go to support the observations of Weir Mitchell and others that chorea is relatively rare in the negro

Sex—Two hundred and thirty-two, or 28 7 per cent, of these cases were in males, 576, or 71.2 per cent, were in females, about the usual proportion

Age—The following table, arranged by hemi-decades, will show the incidence of chorea according to age

TABLE SHOWING INCIDENCE OF CHOREA ACCORDING TO AGE.

YEARS	Cases.	Percentage.
1 to 5	20	2.5
10 to 15	369	46.2
15 to 20	83	10 4
20 and over	20	2.5
Uncertain	10	

It may thus be seen that 84 5 per cent of the cases were between the age of 5 and 15

Number of Attacks—The frequency of relapses and recurrent attacks of chorea is well recognized In 799 of these 808 cases good records could be obtained as to the number of attacks In 499, or 62 4 per cent, the patient was seen in the first attack alone In 163, or 20 4 per cent, there was a history of two attacks In 137, or 17 1 per cent, there was a history of three or more attacks

Incidence of Rheumatism—A point of special importance particularly with regard to the occurrence of cardio-vascular manifestations, is the frequency with which rheumatism was observed, or distinctly noted in the history The atypical and mild character of acute rheumatism in children is familiar Considering the histories given by the patients or their parents, it was deemed wise for our present purposes, to classify arbitrarily, as acute rheumatism, all those cases in which there was a clear, definite history of pain and tenderness in joints The patients and their parents and friends were always carefully questioned on this point Out of 789 cases in which there was a record as to the previous history of the patient, in 171, or 21 6 per cent, a history of rheumatism was obtained [1] In 618, or 78 3 per cent, there was no history of rheumatism

Fever—Observations on the temperature, important though they undoubtedly are, were unfortunately not made in many of the dispensary cases A discussion of the temperature records in the hospital cases is reserved for the section treating of organic heart lesions

Heart—In 118 cases in the dispensary, and in one case in the hospital no note on the heart was recorded Of the remaining 689 cases, cardiac murmurs were detected in 235, or 40 5 per cent, they were absent in 345, or 59 4 per cent In about one-quarter of the instances with abnormal heart sounds, the murmurs were soft systolic souffles, heard at the base alone, or over the whole cardiac area, and unassociated with other modifications of the size or functions of the heart, such as might justify the diagnosis of organic lesion

In 175, or 25 4 per cent, of the cases in which an examination of the heart was recorded, conditions justifying the diagnosis of organic cardiac disease were found In 16 more instances the signs were sufficient to warrant a reasonable suspicion that such changes were present Including these, the proportion of cases with possible organic change would be raised to 27 7 per cent

Character of the Cardiac Lesions—The cases in which the diagnosis of organic cardiac disease was made have been divided into three classes, one in which the condition was certain, another in which the existence of organic change was regarded as probable, a third, which has been already mentioned, including 16 cases in which organic lesions were suspected Taking into consideration those cases only in which organic lesions were deemed probable, 175 in number, there were

Cases of mitral insufficiency	111
Cases of mitral stenosis	7
Cases of mitral stenosis and insufficiency	39
Cases of mitral and aortic insufficiency	10
Cases of mitral stenosis and aortic insufficiency	1
Cases of double mitral disease and aortic insufficiency	1
Cases of acute endocarditis probably mitral in character	6

In 20 instances with definitely recognized organic lesions an acute endocarditis was also present There were 3 cases of acute pericarditis In 2 instances a diagnosis of adherent pericardium was made in a relapse.

Fatal Cases—There were 4 fatal cases of chorea insaniens, and one case in which the patient died during an attack of acute rheumatism which had been associated with a choreic attack Of the 4 cases of chorea insaniens there were autopsies in two instances In both of these cases the patient had had rheumatism, one in connection with the fatal attack In both instances acute endocarditis was found, once, mitral, once, aortic and mitral Of the two other cases, in one a well-marked endocarditis and pericarditis was recognized *intra vitam,* while in the second, a soft systolic murmur alone was audible over the cardiac area, at the same time, however, high fever and an extremely rapid, irregular pulse justified the diagnosis of an endocarditis In this case there was no history of rheumatism In the fifth case, in which death occurred during an attack of acute rheumatism which had followed chorea, there was subacute endocarditis of the mitral and aortic valves as well as an acute pericarditis

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* Read in the Section on Practice of Medicine of the American Medical Association, at the Fifty-seventh Annual Session June 1906

[1] In some of these cases rheumatic symptoms were observed while the patient was under treatment.

RELATION OF THE CASES WITH CARDIAC INVOLVEMENT TO RHEUMATISM, TO RECURRENT ATTACKS AND TO FEBRILE MANIFESTATIONS

Relation of Rheumatism to Cardiac Involvement —It was deemed of interest to note the relation of those cases with cardiac involvement to rheumatic complications The following table shows the proportion of instances in which acute rheumatism occurred among the cases, with and without cardiac involvement

TABLE SHOWING INCIDENCE OF RHEUMATISM

	Rheumatism.		No history of rheumatism.	
	Cases.	Per cent.	Cases	Per cent.
Without cardiac involvement	105	16 9	513	83
With cardiac involvement	66	38 5	105	61.4

The relatively higher percentage of a history of acute rheumatism in those cases with cardiac involvement might, in part, be due to the fact that a large proportion of these cases were hospital patients whose histories were taken with greater care and accuracy Looking at the question from another standpoint (Chart 1), however, it was found that

Of 171 cases with a history of rheumatism, 34.5 per cent. showed organic cardiac lesions

Of 618 cases with no history of rheumatism 16 9 per cent. showed organic cardiac lesions.

It is clear, therefore, that cardiac manifestations were more frequent in those patients who had suffered from acute polyarthritis

Relation of Relapses and Recurrent Attacks to Cardiac Involvement —The following table bears on the question of the relative frequency of recurrent attacks in cases with and without cardiac lesions

TABLE ILLUSTRATING FREQUENCY OF RECURRENT ATTACKS IN CASES WITH AND WITHOUT CARDIAC LESIONS

	Single attack		Two attacks.		Three or more attacks	
	Cases	Pr ct.	Cases	Pr ct.	Cases.	Pr ct.
Without cardiac involvement	414	65 6	121	19 2	94	14 9
With cardiac involvement	85	50	42	24 7	43	25.2

If, again, one divide the total number of cases into three groups, those in which there is a record of but one attack, those in which there is a record of two attacks, and those in which there is a record of three or more attacks, and study the percentage of cardiac lesions in each group (Chart 2), the following figures are obtained

PERCENTAGE OF CARDIAC LESIONS IN CASES WITH SINGLE AND MULTIPLE ATTACKS.

	Single attack		Two attacks.		Three or more attcks.	
	Cases.	Pr ct.	Cases	Pr ct.	Cases	Pr ct.
Number of cases	499		163		137	
Cardiac lesions	85	17	42	25 7	43	31 3

The histories of individual cases, moreover, show very clearly in a number of instances, the development of cardiac lesions with relapses and recurrent attacks

Relation of Fever to the Development of Cardiac Complications —The temperature, as has been said, was regularly recorded only in hospital cases In but 1 out of 110 instances was there a complete absence of fever during the attack In 4 more of these cases it was noted that the temperature was normal during the greater part of the time, the elevations being slight and occasional In the rest of these cases there were frequent elevations of the temperature above 99 degrees, in the majority, indeed, it remained somewhat above normal during the greater part of the acute attack

Of particular interest is a comparison of the temperature records of those patients with and without cardiac complications The following table shows the temperature records in 48 cases without demonstrable cardiac involvement as compared with 59 cases in which organic lesions were detected

TABLE SHOWING PREVALENCE OF FEVER IN CASES WITH AND WITHOUT CARDIAC INVOLVEMENT [2]

Temperature	No fever		99 to 100		100 to 101		101 or above.	
Cardiac Involvement	Cases	P. A.	Cases	Pr ct	Cases	Pr ct	Cases	Pr ct
Absent	1	2	19	39 5	24	50	4	8 3
Present	0		9	15 2	19	32 2	31	52.5

If we look now at the question from the standpoint of the percentage of cardiac lesions detected among these cases when arranged in groups according to the degree of fever present (Chart 3), we obtain the following suggestive table

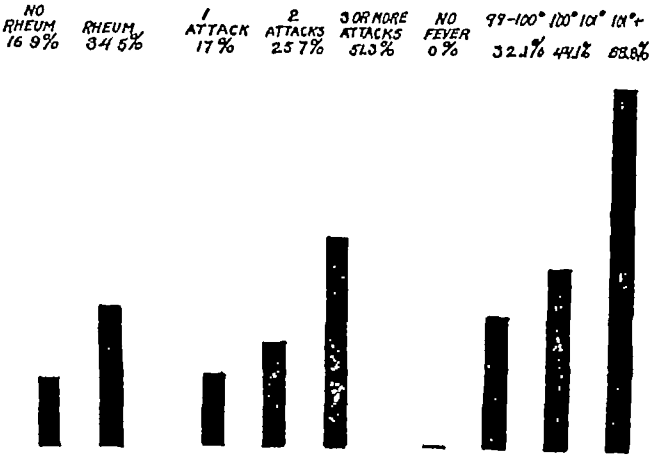

Chart 1. Chart 2 Chart 3

Chart 1 —Percentage of cardiac lesions in cases with and without a history of rheumatism

Chart 2 —Percentage of cardiac lesions in relation to number of attacks.

Chart 3.—Percentage of cardiac lesions in relation to the degree of fever

TABLE SHOWING PERCENTAGE OF CARDIAC LESIONS RELATIVELY TO THE PRESENCE AND DEGREE OF FEVER.

Temperature	No fever	99 to 100	100 to 101	101 or above
Cases	1	28	43	35
Cardiac lesions	0	9 (32 1%)	19 (44 1%)	31 (88 8%)

From the clinical symptoms and the condition of patients returning to the hospital subsequently, there is considerable reason to believe that, in a large proportion of these febrile cases, acute endocardial complications were present In many patients in whom in one attack there was fever without evidence sufficient to justify a diagnosis of organic cardiac lesion there was found on later observation, definite valvular disease

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[2] In one of these cases without heart [illegible] erature was doubtless due to an abscess while in [illegible] with cardiac involvement the high tem[illegible] plicating rheumatism.

CONCLUSIONS

A consideration of these cases would suggest that well marked febrile manifestations, without rheumatism, occurring during the course of chorea, especially if they be associated with undue rapidity or irregularity of the pulse, should be regarded as at least strongly suggestive evidence of acute endocarditis It may of course be possible that such fever is but the index of an infection which lies at the bottom of the choreic manifestations as well as the associated endocarditis Slight grades of fever were, it is true, observed in almost every case treated in the wards of the hospital There is nothing, however, in these studies to justify conclusions with regard to the old question as to whether endocarditis in chorea represents a secondary infection or a special localization of an infectious agent which is responsible for the essential manifestations of the disease

The most important and interesting part of this investigation remains to be carried out, namely, the study of the circulatory conditions in old patients, but it may not be amiss to call attention again to certain points of interest brought out by this preliminary analysis

1 Of 689 cases of chorea observed at the Johns Hopkins Hospital or Dispensary during one or more attacks, 25 4 per cent showed evidences of cardiac involvement, such evidence was present in over 50 per cent. of the patients studied in the wards of the hospital

2 Cardiac involvement occurred with somewhat greater frequency in those cases in which there was a history of acute polyarthritis than where such history was absent

3 Cardiac involvement was commoner in cases of chorea with frequent recurrences than in those in which there was a history of a single attack.

4 In 110 cases of chorea treated in the wards of the hospital there was fever of a moderate extent in almost every instance

5 In a large majority of the cases in which high fever was present there was evidence of cardiac involvement

6 There is good reason to believe that the presence of fever in otherwise uncomplicated chorea is, in a large proportion of cases, associated with a complicating endocarditis

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CARDIAC HYPERTROPHY AS OBSERVED IN CHRONIC NEPHRITIS *

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The frequency of a pronounced hypertrophy of the heart in kidney disease was first pointed out by Bright[1] in 1836 It was exhibited in 23 per cent of his cases, in most of them affecting the left ventricle, without any cardiac or aortic lesion as a cause His theory, chemical in nature considered that an altered condition of the blood either stimulated the heart excessively or else affected the arteries and capillaries in some way to make it more difficult for the heart to drive the blood through to the veins

G Johnson[2] confirmed his findings and adopted the second possibility as an explanation, assuming that the blood is laden with impurities as a result of the renal disease, and that these poisons stimulate the arterioles to contract by way of the vasomotor nerves and so necessitate an hypertrophy of the left ventricle His conception assumed the existence of an hypertrophy of the muscular layer of the arterioles and explained only the left ventricular hypertrophy In 1856 Traube[3] advanced a purely physical theory to explain the cardiac hypertrophy which occurs in chronic nephritis Two factors, he concluded, produce an increased aortic pressure First, an obliteration of numerous vessels in the contracted cortex or their compression by the inflammatory exudate, second, an increase of the amount of fluid in the arteries as a result of the lessened abstraction of water by the reduced kidney structure In regard to the first factor, Ludwig and his followers, however, proved that an increased pressure in the renal vessels would not produce any permanent increase of the general arterial pressure (ligature of both renal arteries) As for the second factor, Traube's opponents claimed correctly that in chronic contracted kidney there was no decrease, but always an increase in the amount of water withdrawn from the blood, and in addition a diminished excretion of urine A resulting plethora is promptly equalized by vaso-dilation and no increase of blood pressure results

Cohnheim[4] modified Traube's hypothesis by assuming that despite the resistance in the kidneys the same amount of blood enters the renal arterioles, and as their tonus depends on the amount of urinary substances to be eliminated there must be an abnormal resistance In 1872 Gull and Sutton[5] considered that a general arterio-capillary fibrosis was the primary condition, and that both the contraction of the kidney and the hypertrophy of the heart were secondary Although this hypothesis will explain the condition in the true arteriosclerotic kidney, it is of no value in interpreting the other forms of renal disease, nor does it account for an hypertrophy of the right ventricle and auricles

In 1877, Ewald[6] found hypertrophy of the muscular layer of the systemic arterioles and suggested that the cardiac hypertrophy depended on this widespread change and that the latter was due to the increased viscosity of the blood with excessive friction in the capillaries The hypertrophy of the auricles and right ventricle is left unexplained by such an hypothesis, and since an accurate method for estimating the viscosity of the blood has been devised by C Hirsch and C Beck,[7] no constant relation between it and increased blood pressure on the one hand and cardiac hypertrophy on the other has been observed In 1878 v Buhl[8] believed both renal lesion and cardiac hypertrophy to be concomitant results of the inflammatory action on the kidney and heart of some unknown substances He found myocarditis in 65 7 per cent of contracted kidneys, and very often a relative narrowing of the aorta Such cardiac hypertrophy he considered excentric, due to a previous dilatation His percentages have not been confirmed except in a measure by Debove and Letulle[9] in 1880 In any event, his theory would not explain the cardiac hypertrophy of other types of renal disease In 1880 DaCosta and Long-

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* Read in the Section on Practice of Medicine of the American Medical Association at the Fifty-seventh Annual Session, June 1906

[1] Guy's Hosp Rep. 1 1836, p 396 vol ii pp 234 and 259

[2] Diseases of Kidney second edition 1856

[3] Über den Zusammenhang v Herz u Nieren Krankheiten Hirschwald Berlin 1856.

[4] Allg Path second edition vol ii p 258

[5] Med Chir Trans vol lv p 1872

[6] Virchow Arch vol lxxi

[7] Münch med Wochschr 1900 No 49

[8] Deut. Arch f kl n Med vol lxxii also Mitt aus dem path Inst z Münch 1878 p 38

[9] Arch gen de Med 1880 vol i p 278

streth[10] attributed both renal disease and cardiac hypertrophy to a degenerative atrophy of the renal ganglia and of the lower cervical ganglia of the sympathetic Senator believes such degenerations are due merely to old age In 1878 he[11] suggested the possibility of different causes for the cardiac hypertrophy in the various types of renal disease In 1902, influenced by Strauss' investigations, he[12] advanced the following "In unfavorable cases of chronic parenchymatous nephritis and secondary contracted kidney, the retained metabolic products irritate the heart and the arterioles, causing contraction of the latter and sometimes an accompanying thickening of their walls Hypertrophy of both sides of the heart results The left hypertrophies more than the right, because the former not only responds by increased activity to the direct stimulation of the blood, but also has to overcome the resistance due to the contraction of the peripheral arteries, whereas the right ventricle suffers less because the pulmonary vessels possess so little tonus In primary chronic interstitial nephritis the same irritation exists but acts more insidiously"

In 1900, Bier[13] sees in the cardiac hypertrophy and the accompanying vascular changes a purely compensatory process, useful and necessary Without it a prolongation of life would be impossible

These in brief have been the more striking theories advanced to explain the frequent association of cardiac hypertrophy in chronic nephritis More recently, 1905, from Krehl's clinic, M B Schmidt[14] compared the blood pressure of numerous cases of nephritis during life with their histologic picture postmortem In pure parenchymatous nephritis without glomerular changes, no increase of blood pressure was observed When the glomeruli were plainly involved the blood pressure was increased From the same clinic A Loeb,[15] in 1905, decided that the cardiac hypertrophy is secondary to increased blood pressure, that both are compensatory reactions, that the increased vascular tonus occurs when the glomeruli are imperfectly supplied with blood, either by an inflammatory process or by stasis, so that their capillaries are thereby under too low pressure for proper filtration He does not decide whether this general vasoconstriction is brought about purely reflexly or by the retention of some poisons In his last edition, Krehl,[16] 1906, accepts Loeb's theory, and adds that all renal affections which do not influence the circulation are accompanied chiefly by alterations of the tubular epithelium, whereas those in which the blood pressure is raised show essentially a glomerular involvement He believes that the increased blood pressure may be produced either reflexly or by substances which are imperfectly excreted by the damaged glomeruli Suggestive of the latter origin, he cites the pressure-lowering influence of a milk diet and the pressure-elevating influence of uremic conditions

In 1905, Müller,[17] of Munich, in discussing Loeb's theory, cites cases to show that hypertension does occur without glomerular involvement, but always accompanied by renal inadequacy He believes that increase of blood pressure and cardiac hypertrophy are limited almost exclusively to nephritis with uremic tendencies and concludes that the uremic poison is identical with or closely related to the substances which induce hypertension, that slightly concentrated they stimulate the vasomotor, strongly concentrated they exert a more or less profound intoxication of the central nervous system[18] As corroborative evidence he cites the almost constant hypertension in uremia, the marked increase of tension and headache (uremic) following a nitrogenous meal, which tendency is practically limited to renal cases liable to uremia He regards the possibility of some adrenal-like substance being the cause of the hypertension[19] and suggests that, whatever the nature of the poison which increases peripheral resistance, it may also exert an irritating action on the heart muscle The cardiac hypertrophy can not be regarded as the cause of the hypertension, but a persistence of the latter must lead to the former, because hypertension occurs very early in many cases of nephritis (scarlet fever, sublimate poisoning) long before any cardiac hypertrophy or arteriosclerosis could develop Neither can any definite organic change in the vessel walls be supposed to cause the hypertension, because the tension especially early in nephritis oscillates so decidedly and becomes normal in acute nephritis as soon as the process has subsided

The relations between arteriosclerosis and nephritis are complicated Probably many poisons affect both systemic arteries and kidney structure, and the same poisons very likely also irritate the heart muscle itself and so assist in the production of an hypertrophy of its fibers The frequent occurrence of aseptic pericarditis argues in favor of a direct toxic action on the heart Rapidity of development and body nourishment are important factors[20] Hypertrophy of the heart has been noted in scarlet fever within 4 weeks With an almost complete loss of kidney substance in cystic and tuberculous kidneys and with the nephritis which develops at the height of a sepsis, no hypertrophy results Although the hypertension must be compensatory and act by increasing the current rapidity through the affected kidneys, yet it is doubtful if the increased excretion of urine is always dependent on such a flooding (Loewi) or on a stimulation of the glandular activity For in some cases with oliguria and edema we see no diuretic action result from salt or other diuretics (caffein theobromin) although in cardiac dropsies such diuretics act surely and promptly Perhaps in such cases the kidney structures on which these drugs should act are diseased

In 1905, Volhard,[21] of Geissen, also attributed the cardiac hypertrophy to an involvement of the water filtrating apparatus (the glomeruli) If increased work is thrown on this mechanism, compensation occurs in one of two ways 1, by an increased filtering surface (extirpation of one kidney, early cases of diabetes with polyuria before cardiovascular changes have resulted) or, 2, by increasing the pressure through the filter

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[10] Am Jour Med. Sciences July 1880
[11] Virchow Arch vol lxxiii p 1878
[12] Spez Path und Ther vol xix, part 1 second edition
[13] Münch med. Wochschr vol xvii, April 1900
[14] Verh d deut path Gesell 1905 p 107
[15] Deut. Arch. f klin Med 1905 vol lxxxv, p 348
[16] Path Physiology Vogel Leipzig
[17] Verh Deut path Gesell., 1905 p. 64

[18] Bouveret quoted by Bradford, Progressive Medicine December 1902 claims that cardiac hypertrophy is absent in just these cases which are prone to develop uremia and soon terminate fatally and that uremia is more frequent in cases without cardiac hypertrophy Bradford in the Lancet Aug 6 1904 p 354 mentions the same combination in the small white kidney

[19] Tigerstedt Forlanini and Riva Rocci

[20] Bradford in Progressive Medicine December 1902 p 238 does not regard the age and nutrition as an important factor because he has seen kidney disease develop in young adults without any subsequent cardiac hypertrophy

T C. Janeway in his paper Chronic Hypertension read before the Association of American Physicians May 18 1906 emphasizes the nutritive factor in arteriosclerosis suggesting that the changes in the coronary arteries and the degenerative tendencies of age make a poor basis for the development of new muscle

[21] Verh Deut path Gesell 1905 p

Rapid severe strains on this mechanism result in injury to the vessel walls and edema as in acute glomerulonephritis A more insidious tax allows the cardiovascular system time to hypertrophy, and the resulting polyuria is perhaps only the expression of an excessive compensation

During the past few years comparatively little irrefutable evidence directly bearing on this subject has been contributed by experimental medicine and pharmacology, although many pertinent questions have been investigated and partially settled, and fruitful fields for more definite information opened

Ascoli and Figari[22] found that in some rabbits with a unilateral ligation of the ureter nephrolysins produced generally (not, indeed, always) a marked cardiac hypertrophy, especially of the left ventricle, in from 2 to 8 weeks, again, that dogs injected with normal rabbit serum showed no variation in the blood pressure curve, while those injected with a mixture of nephrolytic rabbit serum exhibited a contraction of the peripheral vessels Pearce's[23] careful work throws doubt on their claim, and I have been unable to find any confirmation of their findings elsewhere In a thorough review, Sata[24] mentions their work but does not comment on their conclusions Pearce[25] studied adrenalin poisoning in animals After large doses, within 24 to 72 hours he found dilatation of the cardiac chambers, edema of muscles, splitting of muscle cells and acute granular degeneration After daily doses for 11 days (animal living 16 days), the heart muscle was thickened, there was much new connective tissue distributed focally, round-cell infiltration, swelling, vacuolation, granular degeneration of muscle fibers, edema and increase of fine elastic fibers in the new connective tissue. The orifices of the coronary arteries were obscured and obstructed (apparently by a lesion of the aorta resembling recent aortitis) He thinks these lesions have no connection with ordinary myocarditis (human), but attributes them to mechanical efforts of contracting arterioles and over-acting heart Similar results are reported by K. Ziegler [26]

R Tigerstedt[27] gave the name of rennin to a substance which he extracted from kidneys and which, when injected into the blood, markedly raised the blood pressure primarily by its action on the peripheral vascular nerve centers His observations have not been confirmed as far as I know

Richter's[28] brilliant results in producing a typical acute glomerulo-nephritis with hydrops by injecting uran nitrate open a possibility for future research on the question under discussion Heineke and Meyerstein, in Müller's laboratory, have confirmed Richter's experimental glomerulo-nephritis with uran nitrate

Loewi's[29] experiments on caffein diuresis have perhaps added additional reasons for condemning some of the older theories mentioned at the beginning of our discussion Israel[30] fed rabbits with increasing doses of urea for a considerable time and produced hypertrophy of both heart and kidneys

In 1900, Croftan,[31] from a series of experimental injections of xanthin and hypoxanthin in rabbits, concluded that these and kindred substances produce a rise in arterial pressure, spasm and endarteritis of renal and peripheral vessels and cardiac hypertrophy of left and subsequently of the right ventricle No confirmatory experiments are recorded so far as I know

The beneficial action of potassium iodid in arteriosclerosis and nephritis is now credited to its action in diminishing the viscosity of the blood [32] Despite the recent decided interest in nephritis and in arteriosclerosis, as well as the many experimental investigations in point, but few more facts, either pertinent or important, are worth mentioning here To explain some of the difficulties and discrepancies in published statistics, the unfortunate lack of uniformity of classification of the different varieties of nephritis might be alluded to Again, from the cardiac side, accurate observations were lacking until Hasenfeld, in 1897, and von Hirsch, in 1900, both from the Leipzig school, examined the hearts in 25 cases of pure interstitial nephritis They employed Müller's careful method, weighing the individual chambers, comparing the figures with the body weight and making allowances for the co-existence of general edema In brief, over 75 per cent of their cases exhibited an hypertrophy of all chambers of the heart v Buhl's figures were 75 per cent Krehl, Romberg and Henschen have all noted clinical evidence in proof of such a general involvement

From the last 18 months' autopsy records of the New York City Hospital (for which I am indebted to the kindness of my friend and colleague, Dr Horst Oertel, and of his assistants, Drs Symmers and Crowell) different results are obtained. Before quoting them I should mention that probably 75 per cent. of our material was derived from individuals who died above the age of 50, and that Muller's accurate method was not employed

286 Autopsies, 151 Cases of Nephritis

	Per cent of Hyp of of L.V	Per cent of Hyp of L. & R V	Per cent of Normal or Atro Heart
66 chronic interstitial	30 5	11 5	58
22 arteriosclerotic interstitial	27	9	64
25 chronic parenchymatous	12	4	84

Dr Oertel concludes that the microscopic examination of some hearts, atrophic or normal in size, indicates that a previous hypertrophy has existed This is shown by the presence of a certain number of atrophying large muscle fibers Both Dr Oertel's impression and my own (substantiated by a few definite cases[33]) agree that, in many of these cases of atrophic and normal sized hearts, patients came to autopsy in a very poor state of nutrition Three explanations suggest themselves 1 That the patient's power of nutrition was unequal to produce an hypertrophy 2 That the disease developed too severely and suddenly to permit any such hypertrophy 3 That the heart was originally hypertrophied and had become later atrophic In most of our cases more probably the last explanation was illustrated because of the co-existing atrophy of the other organs

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[22] Berl klin Wochschr 1902, p. 563.

[23] Trans. Am. Assoc. Phys., vol xviii pp. 594-5

[24] "Ueber die Wirkung u. die Spezipitate der Cytotoxine in Organismus Ziegler Beit. z. path. Anat., vol. xxxix, No 1 1906.

[25] Jour Exp. Med. vol viii, p 400 1906

[26] Ziegler's Beit 1905 vol. xxxviii, p 229

[27] Skand. Arch. f. Physiologie, vol. xiii.

[28] Die exp. Erzeugung v Hydrops bei Nephritis. Beit. z. klin Med Festschr H C Prof Senator Berlin 1904 Hirschwald, p 283

[29] Arch f exp. Path. u. Pharm 48 p 410 50 p 326

[30] Virchow Arch. 1881 vol lxxxvi p 299

[31] Amer Jour Med. Sc. November 1900 p 592.

[32] Müller O, and Inada Deutsch. med. Wochscht. No 48 1904 also Breitner Pest. Med. Chir Presse, 1905 No 41 p 506 Erlenmeyer Deutsch med. Wochsch., No 7 Feb 15, 1906, p 259

[33] Of nephritis 38 cases have been autopsied in 1906 In 10 the nutrition was marked good" Of these, 6 showed hypertrophy of the left ventricle and 1 of both ventricles. In 3 the heart was of normal size or atrophied. In 7 the nutrition was marked fair" Of these 1 showed hypertrophy of the left ventricle 2 of both ventricles and in 4 the heart was of normal size or atrophied In 15 the nutrition was marked 'poor Of these 4 showed hypertrophy of the left ventricle and in 11 the heart was of normal size or atrophied In 6 the nutrition was marked emaciated" In none of these was the heart hypertrophied.

Any theory in explanation of all the recorded conditions, and especially Loeb's theory, must satisfy the striking peculiarity so well brought out by Councilman last year His autopsy records showed that in amyloid disease, excepting three cases complicated by arteriosclerosis or chronic interstitial nephritis, no cardiac hypertrophy existed despite the very decided glomerular involvement Similar observations are numerous in chronic pyelonephritis with almost complete renal atrophy and cystic degeneration

In an effort at compensation the patient's nutritional capacity must, I conceive, be the keystone to the successful accomplishment of such an effort. Some individuals of poor nutrition, of deficient recuperative power, perhaps due to heredity or to some acquired fault, possess neither a sufficient resistance to the drains of the renal lesion nor the reacting power to compensate the mischief by a compensatory increased tension and subsequent cardiac hypertrophy Suggestive analogies in infection are easily adduced We are all familiar with the progress of syphilis attacking some poorly nourished woman in whom a moderate course of mercury still further reduces her physical condition, while the husband from whom the infection was acquired readily withstands both disease and treatment Again, Wright has several times called attention to cases of chronic staphylococcus infection with a low staphylococcic-opsonic index, in which no response of the organism can be evoked by any method of vaccination or amount of vaccine, whereas in others vaccination promptly raises the index and the patient gets well

The only therapeutic indications to be adduced from this presentation are all so evident and so constantly applied that I hesitate to add, in conclusion We should, of course, first and always, work against the cause, next favor hypertension, or, at least, not combat it early in the disease, then preserve and save the heart by every known method, for example, by limitation of fluids ingested, as von Noorden has so timely urged, and finally, keep up the patient's nutrition in every way, so that as perfect and permanent a compensation as possible may result

The importance of this in the dietetic problem of nephritis was sufficiently emphasized last year by Shattuck It was my good fortune and that of all his pupils for the past fifteen or twenty years to hear him urge time and again the necessity of supporting the nephritic's nutrition

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NOTE THE DISCUSSION ON THE SYMPOSIUM ON DISEASES OF THE HEART WILL FOLLOW THE TWO OTHER PAPERS IN THE SYMPOSIUM, BY DRS DAVIS AND ANDERS, NEXT WEEK.

The Automobile's Possibilities—A satisfactory physician's car can be bought for much less than $1,000 capable of maintaining an average speed of fifteen miles an hour over all but the very worst roads and powerful enough to climb any hill without difficulty One such car will easily do the work of three horses for the busy country physician will double his leisure hours and greatly increase his profits, while during favorable weather the long, tiresome drives behind jaded horses will be delightfully replaced by the rapid motor doing the distances in a fraction of the time, without thought of pity for the motor power or serious loss of time—Dr Doolittle in *The Automobile*

SUCCESS THE SURGICAL DESIDERATUM *

A. ERNEST GALLANT, M.D
NEW YORK CITY

'Tis not in mortals to command success,
But we'll do more, Sempronius,—
We'll deserve it —(Addison.)

When the surgeon has completely removed the diseased structures, repaired damaged tissues or replaced dislodged organs or viscera, and the patient has survived the ordeal, has the operator completed his work or should he see to it that the resulting condition in the months and years to come is such as will elicit from the patient words of praise for the operator and operation?

While it would be a matter of great satisfaction if I could give tables of hundreds of operations without a death, or enlarge on the successes which have (and have not) followed my work, I prefer on this occasion to direct attention to certain factors in dealing with individual cases which will aid the abdomino-pelvic surgeon in attaining this desirable ambition—success—in some cases For convenience and brevity the life history of the surgical patient may be divided into seven stages 1, Antecedent, 2, precedent, 3, preliminary, 4, immediate, 5, convalescent, 6, subsequent, 7, conclusive.

HEREDITARY AND ACQUIRED DISEASES

Tuberculous, rheumatic, gonorrheal or syphilitic diseases, whether involving the lungs, heart, liver, kidneys, spleen, brain and spinal cord or the gastrointestinal tract, must be taken into consideration before operation, as well as after This was forcibly brought to my attention after operation on a man for appendicitis For four years previously he had been treated medicinally for locomotor ataxia, which had been controlled After operation the wound showed no tendency to heal The man failed to retain nourishment by mouth or rectum and died on the tenth day of starvation The consulting surgeon opposed all my solicitations for energetic antisyphilitic medication, until the eighth day, at which time the patient was too low to absorb any drugs [1]

An hereditary history of uterine cancer, the grandmother having died at 65 years of "cancer of the womb" and the mother when 49 years old, was considered justification for vaginal hysterectomy in Mrs K K, aged 38 mother of 5 living children, who was suffering from menorrhagia, lasting of late from 8 to 10 days The enlarged uterus was retroverted and adherent in the cul-de-sac During the past 14 months she has gained in health and strength, and is happy in the assurance that she is practically free from the danger of following in the footsteps of her grandmother and mother

THE PRECEDENT HISTORY AND EXAMINATION

The precedent history must always be given due consideration when deciding whether to operate at once or later Rupture of any viscus solid or hollow, calls for immediate action, strangulation, twisting, or complete obstruction demands immediate operation whereas on the other hand, we avoid operation during the acute invasion of the peritoneum by the gonococcus and prefer to wait for "a more convenient season" when the Neisserian enemy shall have been starved into inactivity When confronted by tubercular peritonitis cysts fibromata, etc of slow growth we can more deliberately decide when and how to operate

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* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association at the Fifty-seventh Annual Session June 1906

[1] Amer Med., vol iii p 837 1903

The precedent examination must enable the surgeon to answer, without bias, the following interrogations (1) Does the focal condition explain and account for all the symptoms, or are other regions involved? (2) Has the attending physician, who has done his best, done all? (3) Is operation the only means of relief, and will the proposed operation remove all the trouble and relieve all the symptoms? In order to answer these queries intelligently the surgeon must be, first, a diagnostician—theoretical, logical and mechanical, second, a general practitioner, familiar with all that is best other than surgery, and, last, a surgeon who has the moral courage to decide when not to operate

Extraordinary recoveries without operation do occur and nonplus the surgeon, as in the case of Mrs C, aged 60, who for three weeks had been suffering with pain and swelling in the right half of the abdomen, eleven years ago she had a similar attack. The urine was scanty, temperature varied from 100 to 103 6 F, pulse from 80 to 100, tongue was deep red and fissured down the middle There was rapid loss of flesh and strength. Her abdomen was enormously distended and fluctuant A diagnosis of hydronephrosis was made and operation advised Recently her son informed me that by the use of ice for ten days the swelling had been scattered, and the old lady had sailed away to her native sunny Italy

PRELIMINARY PREPARATION OF PATIENT

The preliminary preparation of the patient for operation must aim for surgical cleanliness, cleanliness of the emunctories and mind In my work this begins two days before operation, liquid diet is given, alternating with water, eight ounces, every hour, the kidneys are washed out, and two laxative pills to clean out the bowels are given the second night before operation To relieve the patient from undue unrest and to secure restful, good sleep a sedative is given each night In cleansing the patient the night before operation my plan is as follows (a) An enema of one quart of soapsuds, (b) a 1 to 2000 permanganate of potash, douche, (c) the hair is clipped close from the mons and vulva, (d) the abdomen and vulva are anointed with tincture of green soap, which is rubbed into the skin until dry, with a second and third coat, one over the other, each rubbed in until dry In this way the soap penetrates the skin, the patient then goes to the bath tub and the nurse soaks and scrubs the abdomen and vulva until all the soap is removed, a process which involves more work than would at first seem likely, and secures cleanliness to a degree unobtainable by the soap plaster method After drying the skin, three more coats of green soap tincture are rubbed on the skin and remain as a protective until the patient is placed on the operating table ready for the final scrub

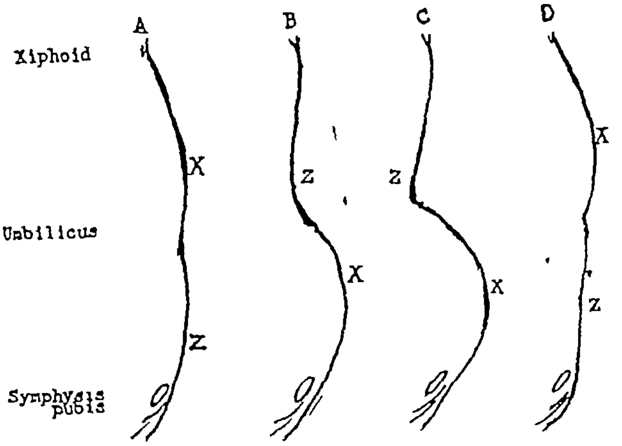

Fig 1—Lead tape outline of the anterior abdominal wall in Glenard's disease (visceroptosis) A, normal outline, standing without clothing B ptosis outline standing without clothing C, ptosis outline standing with waistbands fastened, D outline same case when recumbent X, point of maximum protrusion, Z, point of maximum flattening

THE ANESTHETIC AND OPERATION

The immediate steps involved are anesthesia, field preparation and operation.

As a stimulant of great value to the patient, a heart sedative and a quieter of respiration we use morphin (1/12 to 1/6 grain, in proportion to weight), placed dry on the tongue, 15 minutes before beginning ether The shoulders should be level with the table and the head should be raised high enough to bring the chin near the sternum, a frequently overlooked measure for securing comfortable breathing Ether, about half an ounce, is poured on my modification of the Allis inhaler, which is handed to the patient who holds it on the chest, near the mouth, and administers the anesthetic to herself, without fear of choking or of being suffocated After a few minutes the patient will ask the anesthetist to take the cone, or her hands will relax and make it necessary to take it from her and to continue the administration, which has been free from the fear and nervousness felt when other methods are practiced In this way a little ether is wasted, and the time prolonged, but to the patient the method is excellent. My average, per hour, has for years been 100 c c Squibb's ether

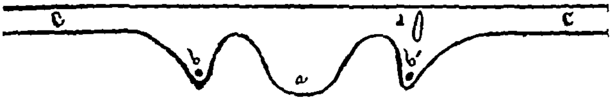

Fig 2—Outline of abdominal "stock." Apron "a" is cut the shape of the space bounded by the anterior superior spines above, the groins, laterally, and the symphysis pubis below The straps "c and c'" pass around the body the end of c being drawn through buttonhole "d and are pinned in front at "a." Perineal straps (not shown) fastened to buttons on tongues "b" and "b are pinned in front to "a"

The preparation of the operative field is accomplished by adding more soap, rubbing it in until dry and then scrubbing thoroughly until all the soap has been washed away The skin is next rubbed with alcohol and then covered with a sterile towel

The incision is made as short as the size of the fingers will admit, and as long as the size of the tumor necessitates, by preference through the inner edge of the rectus, even for appendicitis, as it affords access to the tubes on either side Ligatures are applied to individual vessels, suture to broad surfaces, making use of No 1 or 2 catgut For facilitating the passage of sutures I have found the ingenious ligature carrier of Kurz very helpful

As a rule, saline solution is used to wash out pus and blood, but at times I prefer simply to mop out the cavity and to close without drainage After removal of broad ligament cysts, and after supravaginal hysterectomy, I carry a roll gauze drain into the vagina A cigarette drain suffices after most appendicectomies

Cocain, 1 per cent, injected under the epidermis, has served well in rupture of gastric ulcer, ruptured ectopic pregnancy, etc Unless the patient is in a very bad condition I prefer to employ but one assistant, who must hand instruments, dressing, etc, thus reducing the chances of infection to a minimum Closure of the wound is accomplished by carrying a long-handled needle through all the structures, it is then threaded with silkgut and reversed, the fascia is then approximated with two, three or more catgut sutures, and intermediate silkgut to align the skin closely

If much blood has been lost, the cavity is filled with saline solution, 120 F, or from two to four pints are allowed to run into the rectum while the patient is still on the operating table

POSTOPERATIVE CARE

Immediately subsequent to the operation I exercise great care not to expose the patient to a chilling of the surface by well-meant efforts on the part of the nurses to change the blankets and underclothing, preferring to wait until the patient is warm in bed and conscious enough to help

As soon as the patient is conscious enough to drink she is made to take four ounces of hot (not tepid) water every fifteen minutes until vomiting occurs, as a means of washing out the stomach and ridding it of ether and mucus, then I wait two hours and thereafter give water hourly If the stomach retains this quantity of water for six hours it is safe to begin giving milk and lime water Lavage of the stomach while the patient is on the operating table will accomplish the same purpose, and in the few instances in which I have used it it has been very satisfactory

For pain and nervousness I make use of bromid, chloral and a small quantity of morphin, on the ground that if sleep and rest be secured the patient will bear the next day's discomfort with greater fortitude To secure rest these patients must be permitted to assume any position which will afford the least discomfort and I permit them to turn from side to side or lie on the back, as they deem best

To the "tired, worn and weary" one who has been but a few hours removed from the operating table, nothing is so quieting and refreshing as light, gentle massage over the whole body, as shown by the patient falling to sleep during the process

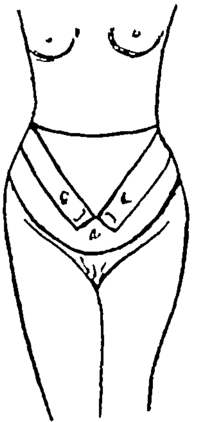

Fig 3 —Abdominal "stock adjusted.

Postoperative weakness is largely due to muscular atrophy from disuse while in bed, and it is my custom in order to avoid this effect to have the patient massaged once daily for the first three days, adding passive motions during the fourth, fifth and sixth days and active, resistant movements for the succeeding days in bed When cared for in this way the patient can walk about the room as soon as she gets out of bed, experiences little, if any, of the feeling of faintness so commonly complained of, and within a few days is strong enough to go out doors This plan is in line with the views of our Chairman as expressed before this Section in a paper entitled "Massage and Exercise in the Management of the Puerperium,"[2] and by Howden[3] where he advocates postoperative exercises as a means of preventing hernia My own use of massage and exercises in puerperal women has been most satisfactory, and after the first time the patients "cry for it"[4]

While we agree, in the main, with Bayard Holmes in the desirability and practicability of "the short narcosis, the short incision and the short stay in bed after ideal operations,"[5] we have lacked the moral courage to get our patient out of bed on the second day after celiotomy, but are firmly convinced that the patient, without elevation of temperature, pulse or respiration, and primary wound union, will derive greater benefit from the operation if the stay in bed is limited to the shortest possible practical time, say seven days or more, as her condition may indicate Even for a healthy individual, sitting up in bed is a most uncomfortable position and can not be maintained for any length of time unless the patient can sit cross-legged, I prefer to let her sit up in a rocking chair

The most distressing complications to patient and surgeon after operation are intestinal distension and acute dilatation of the stomach Since 1892 I have made use of massage and kneading of the abdomen whenever the accumulation of gas becomes disagreeable, usually within thirty hours after operation, and by this means, after fifteen or twenty minutes, the patient usually expels large quantities of flatus, which relieves the pain and stops the vomiting[6] As an adjuvant to the stomach tube in the class of cases so graphically described by Herrick[7] as "acute dilatation of the stomach" I have derived much good from massage and kneading but in spite of all I lost one patient, from this cause, after excision of a small urachal abscess which opened at the umbilicus

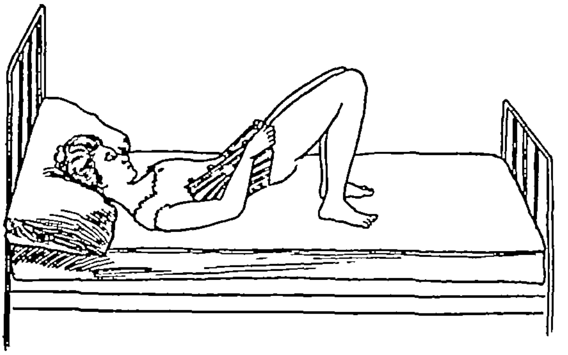

Fig 4 —The semiopisthotonos posture, patient lying on bed or couch hips raised causing viscera to gravitate toward the dia phragm when applying the 'abdominal stock or special corset

While tympanitic distension is unrelieved I deem it most unwise to add to the discomfort of the patient by administering salts, calomel, etc, by the mouth, preferring to introduce salines or cathartics or soap suds into the rectum to overcome from below the antiperistaltic action of the intestines At the same time the patients receive only water by mouth until the bowels are relieved It is often surprising to note how well patients will do on water only

Enemata are always introduced through a short rectal nozzle, with the patient lying on the *right side*, the hips being raised on a pillow, the vessel or douche bag being slung not more than a foot above the anus Given in this way, the fluids enter very slowly, cause no irritation gravitate to the lowest point, the caput coli, and are retained with greater comfort to the patient

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[2] The Journal A. M. A 1902 vol xxxi p 355
[3] Med Rec. 1904 vol. lxv p 160
[4] Amer Med vol vii p 783 1904
[5] Amer Med 1905 vol x p 1025
[6] Mathews Med. Quarterly July 1896
[7] The Journal A M A., 1903 vol xlvi p 923

LATENT MALARIA?

Delafield, in his lectures to students, calls attention to the manifold varieties of malarial fever met in New York and vicinity It has been my worrisome experience to meet several instances in which, immediately after operation, the temperature, pulse and respiration shoot up, remit twice daily and are associated with marked abdominal distension, and a very distressing headache, the one feature which disturbs the patient most, as it does not let up During the remissions the patient's pulse is of good quality, the face and tongue show no signs of sepsis, though there may be some abdominal tenderness, probably due to the distension This condition continues for some days, with or without vomiting, even after the bowels move and gas has been freely evacuated, and yet, in spite of all, while the patient is very much distressed, she does not look like one who is seriously ill

Having studied malarial vagaries in person when living in New Jersey, and later noticing the frequence of remittent fever in puerperal patients when at the Sloane maternity and in private obstetric practice, in spite of the absence of demonstrable plasmodia in the blood and from the clinical fact that the only drug which has given relief is quinin, I look on this post-operative complication as a latent malaria which, owing to the depression following operation, phoenix-like, bursts into a flame, poisons the patient, worries the nurse, makes lunatics of the family, and adds many a gray hair to the surgeon's head

Following the teaching of my preceptor, Dr E S McClellan, who antedated Koch by twenty-five years I give 5 or 10 grains each of the sulphate of quinin, iron and magnesium with ten minims of sulphuric acid, dilute in solution once daily seven hours before the hour of the highest temperature of the preceding day *The effect is most gratifying to patient and surgeon,* as illustrated by the accompanying chart of a patient following laparotomy, for restoration of a retroverted uterus held down by very thick cord-like bands

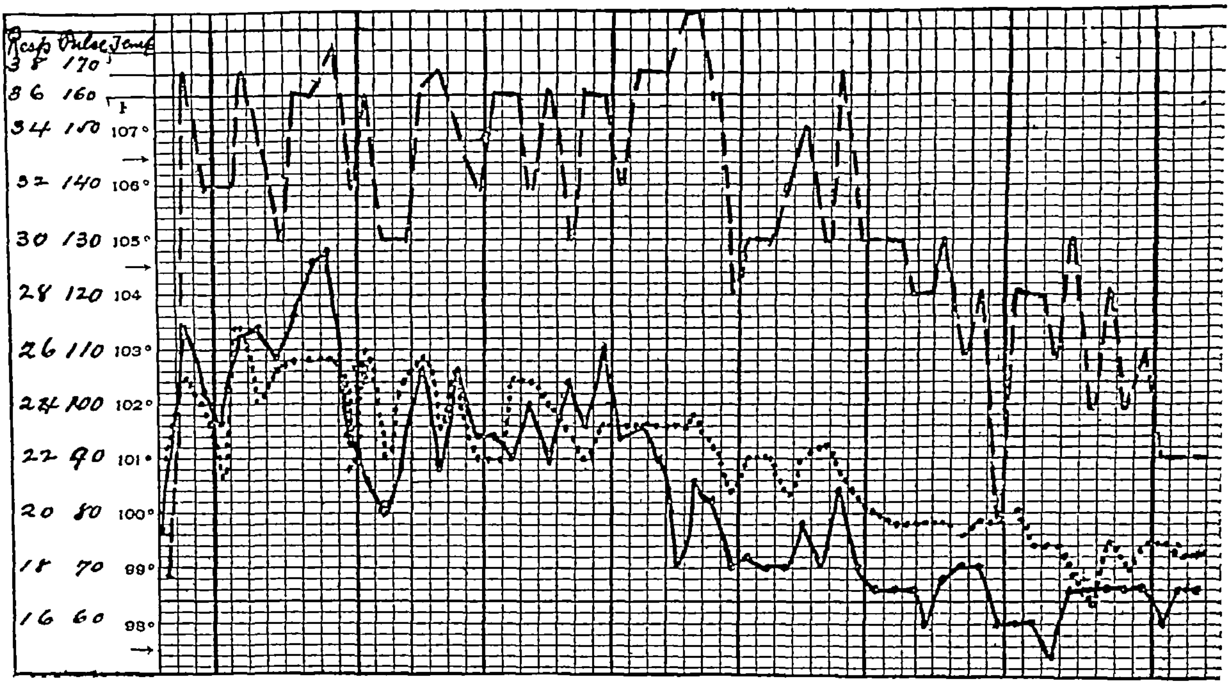

Chart 1 —Respiration - Pulse , Temperature ————

CONVALESCENCE

Now that the patient is ready to get out of bed, the order has been given for a general tonic, and instructions as to daily calisthenic exercises, etc., have we done our whole duty and provided against a relapse, perhaps return of many of the symptoms, which have been in abeyance during the period of rest in bed? From our standpoint, no In a paper entitled "Waistbands and Corsets in the Genesis and Treatment of Glenard's Disease"[8] I endeavored to show that the present manner of fastening the clothing and corsets around the waist is the greatest curse to women of the civilized peoples of the world, productive of distension of the lower abdominal wall, distortion of the stomach, displacement of the colon, kidneys, liver, spleen and even the heart in such a large proportion of women as to call for its recognition or exclusion ere we permit any of our patients to resume their ordinary mode of life This holds good after suture of prolapsed viscera, or pelvic work, especially when the anterior abdominal wall of the woman standing resembles an inverted interrogation mark—so truly pathognomonic of visceroptosis (Fig 1) This condition is very apt to be overlooked unless the examiner observes, palpates and percusses the abdomen with the patient undressed, standing, and, in order fully to appreciate her condition when dressed, ties a piece of muslin bandage around the waist to imitate as nearly as possible the waistbands when tied (Fig 1 B) In this way only can we ascertain the real extent of visceral displacement.[9]

In endeavoring to meet the requirements for the relief of these ptoses I make use of the abdominal stock binder, Rose's plaster and a corset of peculiar design.

The Abdominal Stock —This is made of 18-inch wide unbleached muslin, two yards long, doubled, and is cut to fit each patient by placing the free edges on a level with the mons and marking with a lead pencil the outline shown in Figure 2 The apron-like center piece corresponds to the suprapubic area and curves outward over the iliac crests, thence down to the gluteal fold to form the tongues, "b'" "b," the bands, "c" "c'" running out to the full length of the muslin on either side At "d" a buttonhole, three inches long, is made, through which to slip the end, "c," after it has been carried around the waist (Fig 3) Perineal straps of tape threaded through quarter-inch rubber tubing are attached by a loop to the buttons on "b" "b'" and pinned to "a" on the corresponding sides The pattern was obtained some years ago from a nurse who was unable to tell who was the original designer

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[8] Canadian Jour Med. and Surg July 1903

[9] "The Symptomatology and Diagnosis of Glenard's Disease" International Clinics 1904 Fourteenth series.

Some patients can put up with the irritation of the Rose's plaster bandage and wear it for a month without undue discomfort and during that time are fitted for the special corset.[10]

Position of Patient—Before putting on the binder plaster or corset the patient places herself in the elevated dorsal posture (semiopisthotonos, Fig 4), rubs the abdominal contents in the direction of the diaphragm, and while in this posture adjusts the garment When the patient stands up the lax abdominal wall, with the replaced viscera, are supported by the corset and can not prolapse [11]

THE ADHERENT DILATED STOMACH

While conducting some investigations on the position of the kidney at the pathologic department of Columbia University, with the kind co-operation of Dr B B Gallaudet, we ran across instances of dilated stomachs, adherent near the pelvic brim by the omentum, colon, appendix, etc , preventing the stomach from contracting and neutralizing any efforts on the part of the physician to relieve the dilatation The same condition has since been met at operation and on the autopsy table The diagnosis can be made by placing the patient in the semiopisthotonos posture or on the hands and knees —if the stomach is non-adherent it will gravitate toward the diaphragm and *vice versa*.

In thin patients the stomach will not ascend, as it should do, during inspiration, the succussion note remains below the umbilicus, and the chronicity of the gastritis and malnutrition, without periods of improvement in general health, is a picture we can not fail to recognize

The treatment of adherent, dilated or prolapsed stomach can only be surgical—freeing adhesions, plus gastroplication, gastropexy, or posterior gastroenterostomy In one instance, adhesion of the stomach to the left pelvic brim had followed appendicitis I opened above the umbilicus, expecting to do a gastroenterostomy The greater curve lay just above the pelvic brim On separating the adhesions, the patient vomited, the stomach contracted so much that it would have been difficult to pull the small contracted stomach through the wound sufficiently to do an anastomosis Without any further steps the wound was closed, and during the year past the stomach has never extended below the umbilicus This patient wears a special corset

CONCLUSION AND SUMMARY

In conclusion and summary of these, my personal predilections, I would lay especial stress on the following factors, which, when properly applied in appropriate cases, will oft-times bring success and cure the patient

1 A most careful consideration of antenatal and postnatal diseases and the chronicity or acuteness of the present condition before deciding to operate or not to operate

2 The liberal use of water by mouth and rectum before, during and after operation The free application of tincture of green soap, rubbed into the skin until dry, when preparing the field of operation and the hands of the operator and assistant

3 Minimum morphin before anesthesia, care that the head is properly elevated, the ether administered by the patient herself in the first stage, and a minimum quantity of ether employed

4 A reasonably short incision, a reasonably quick operation, a reasonable number of sutures to close the wound, and a reasonable time in bed

5 After operation the careful prevention of chilling the body, the cautious use of morphin and sedatives, lavage to allay undue vomiting, and colonic massage and kneading for relief of distressing intestinal distension, with continuous rectal irrigation for tympany

6 To invigorate the tired patient and to prevent muscular atrophy and cardiac weakness, general massage, with passive and active movements daily while in bed and calisthenics when first about

7 For the prevention of hernia and enteroptosis or support of prolapsed organs apply the abdominal "stock," Rose's plaster bandage, or a special corset, put on while the patient is in the dorsal-inclined posture

60 West Fifty sixth street.

DISCUSSION

Dr M. I. Rosenthal, Ft Wayne, Ind , has made it a practice, when the peritoneum is closed, to have the anesthetist wash out the stomach with normal salt solution while the patient is still under profound anesthesia The patients so treated vomit less frequently and complain less of thirst

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A PLEA FOR THE SCIENTIFIC ADMINISTRATION OF ANESTHETICS *

JAMES TAYLOE GWATHMEY, M.D

NEW YORK CITY

There is no more reason why we should adhere to the drop method of chloroform or the cone method of ether when a better and more exact method is produced than that we should continue to use the "one horse shay" when the automobile is available Nor is it sensible to continue the foolish custom of allowing the most inexperienced interne to narcotize instead of having a professional anesthetist in every hospital

Furthermore, because a man has given an anesthetic many times during his hospital service and irregularly afterward, it is no evidence of his ability to do the same thing several years after, with even a reasonable degree of success The wonderful advancement in all departments of medicine has come from men devoting their exclusive time to some one branch of it, and especially is this true of anesthetics We are indebted to England, where the professional anesthetist prevails in hospitals as well as in private practice, for all recent progress in the administration of anesthetics Here in America, where both nitrous oxid gas and ether were first discovered and used, we seem still content to continue what might be called "frontier" or "border' life with the mortality table the same as when anesthetics were first introduced

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10 International Clinics 1905 Fifteenth series.

11 Nephropexy, Pro. and Con., N Y Med Jour., April 29 1905

* Read in the Section on Laryngology [illegible] the American Medical Association at the Fifty [illegible] June 1906

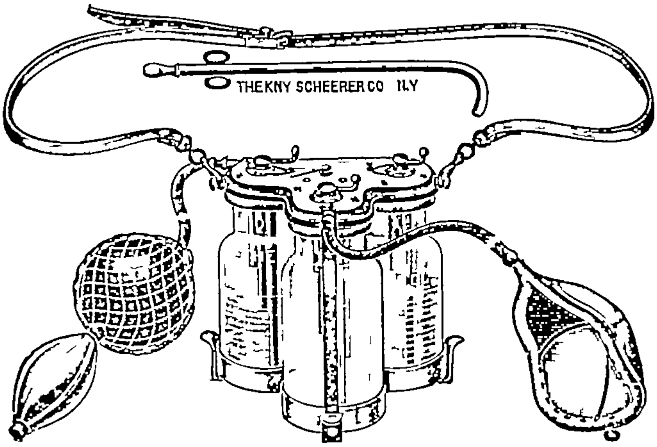
The production of anesthesia, like hunting, billiards, or any other thing in life requiring skill, should fall into the hands of one who is giving himself entirely to that branch and who loves it for its own sake The ownership of an anesthetic outfit by a physician who has the price does not necessarily qualify him as an expert Especially is this true if he is attending to the general practice of medicine or some other branch of it and using this subject as a makeshift To such men the exact method of anesthesia will not appeal

RECENT PROGRESS

The English have produced the Harcourt inhaler, giving a maximum 2 per cent chloroform vapor and a minimum 1/10 per cent The French have produced the Giglìementi Roth Drager apparatus for the exact administration of known percentages of chloroform and oxygen vapors The Germans have given us the Braun apparatus for the administration of an attenuated ether vapor to be supplemented with small amounts of chloroform from time to time as indicated With these object lessons for the scientific administration of anesthetics before me, I have succeeded in producing an apparatus giving a known percentage of chloroform and oxygen (or air) and also an attenuated ether vapor, or any combination of these two drugs

APPARATUS DESCRIBED

The apparatus (the successor of the three bottle inhaler) consists of two six ounce bottles, one for chloroform, one for ether Both bottles are placed on a tin vessel containing thermalite. This "thermalite warmer," if placed in boiling water for three minutes, will stay warm for over one hour and a half If the heat is to be continued, this can be accomplished by simply taking the stopper out, thus exposing the thermalite to the atmosphere The liquid now begins to re-crystallize and in turning to a solid again gives off heat for another hour and a half Or the instrument can be boiled for three minutes, cooled immediately by placing in cold water and the stored heat turned on at any time needed by taking out the stopper, and thus starting up recrystallization The size and the cost of the apparatus are thus reduced nearly one-half The technic is also much simplified


THE KNY SCHEERER CO NY

The small switches on the top of each bottle are so arranged that chloroform or ether, combined or separately, can be given and in any strength desired All of the vapor being warmed, it is more respirable, reducing the after effects, and at the same time increasing its safety as regards life The vapor percentage, when using either oxygen or air, can be increased or decreased, without at the same time increasing or diminishing the anesthetic

In each of these bottles there are three tubes, varying in length from one that reaches the bottom of the bottle to one that penetrates only the stopper These tubes represent three degrees of vapor strength, the longest, No 3, with the mask, has an estimated 1 8 per cent vapor strength, the shortest, No 1, representing a very attenuated vapor strength, 0 1 per cent chloroform In addition to these degrees, by simply turning a small lever, without removing the mask, the patient gets pure air, or a mixture of oxygen and air

The percentage varies according to the depth or amount, and also to the temperature of the liquid, the size of the hand bulb, and the pressure with which the air or oxygen is forced through the tubes, either by the hand bellows or from the oxygen tank It also varies with the tube through which it is passing, the longest tube representing, with the mask, nearly 2 per cent, and the shortest a fractional, or 1/10 per cent vapor As the mask is not air tight nor arranged so that the vapor can be compressed, there is no possible danger of getting more than this amount, although it is possible to lighten the anesthetic to any degree desired

ADMINISTRATION

If the patient is a strong, vigorous man or an alcoholic, the longest tube is used to get him completely under, then the stop-cock is turned to the second longest, or No 2 If the lid reflex is still sluggish, the lever may be turned to No 1 If, now, this reflex gets too active, try the second length or No 2 tube By thus working up and down from the shortest to the longest tube, and by also varying the pressure, the patient can be kept between an active lid or swallowing reflex, on the one hand, and a very dull lid reflex on the other If the patient is an infant or is very weak, only the shortest tube is to be used from the beginning

The mask is similar to a folding Esmarch mask, the rim of which is hollow and perforated with small holes around the inner margin so as to allow the vapor to escape It is covered with two to four layers of gauze, over which is placed a piece of oiled silk or rubber tissue A small opening, the size of a ten-cent piece, is cut in the middle of this gauze, so that, during the induction period, a few drops of chloroform may be added as is sometimes necessary with vigorous alcoholics There are neither valves nor bag, consequently there is no rebreathing, no unnatural or strained breathing at any time.

This apparatus will not attract those who wish to give a minimum amount of time and thought to this branch of medicine, but it will appeal very strongly to the surgeon who has the highest welfare of his patient at heart By the administration of cologne during the first minute, or until the mucous membranes become saturated and the patient is breathing regularly, the element of fear is eliminated before the anesthetic is turned on at all, and the very small percentage of deaths from fright will thus be absolutely done away with The patient is entirely unaware of the attenuated chloroform vapor and sinks into a quiet and natural sleep, with the stages of excitement entirely absent or reduced to a minimum During the narcosis the disagreeable mucous râle is eliminated, the billowy breathing is absent, neither do we have the quiet and sometimes imperceptible breathing that accompanies chloroform as usually administered, which is so very alarming to the anesthetist

The patient is barely submerged and the reflexes are just abolished Thus we may say that the patient is within calling distance at any time If a severe hemorrhage should occur or shock from any cause take place during the operation, the anesthetic can be quickly eliminated from any part that it might take in producing this state

The pulse, color and respiration are nearer normal, generally speaking, than with any other method of administration To administer this attenuated vapor of known percentage successfully, the anesthetist must at all times be on the *qui vive* He must observe all signs and symptoms and graduate his anesthetic accordingly To the interne who is in the habit of watching the operation most of the time and at irregular intervals loading up his patient with ether, this narcosis will be a hardship

The after effects from the warmed-over ether and chloroform vapor in 98 per cent. of the cases are nothing, for the following reasons

1 The glands of the buccal cavity have not been unduly excited and consequently the nauseating ether saliva is not present

2 A carbon dioxid poisoning is also absent, as there has been no re-breathing When the blood has rid itself of the drug, the patient immediately returns to a normal condition With any closed method we have more or less carbon dioxid in the blood, and ether saliva in the stomach plus the anesthetic to contend with

3 Acid intoxication and late poisonous effects of anesthetics, as noted by Arthur D Bevan and Henry Baird Favill,[1] need not be dreaded

Their article, while exhaustive, shows a lack of appreciation of the subject of anesthesia In not a single history of all the cases enumerated was the amount or method of giving stated With the anesthetic heated to the temperature of the blood (100 F) and with an attenuated vapor of chloroform or ether given, as the case requires, I have no hesitancy in saying that these late effects will be an impossibility

The percentage of deaths from anesthetics would be materially lessened if surgeons themselves knew a little more of the theory of narcotics For instance, many surgeons will allow an irregular narcosis (which is always dangerous) Now, if the patient suddenly shows that the reflexes are not entirely abolished, the command may be given to "push the anesthetic" If the anesthetist is inexperienced, he may follow implicitly the surgeon's directions, regardless of the condition of the patient. The patient may now take several long, deep respirations and then hold his breath, and thus invite a fatality if chloroform is being administered

WARMED CHLOROFORM

Chloroform should never be administered, even by the drop method, at a normal temperature If the vapor method is not used, a very simple way is to have a pan of hot water (100 F) on the anesthetist's table in which to place the chloroform bottle from time to time The value of warmed-over vapor of ether has been known since 1877, when Dr Glover invented his portable regulating inhaler, but the value of warmed-over chloroform has not been recognized up to this time In order to determine the comparative value of chloroform as regards life, when heated to 100 F and at normal temperature, I recently made a number of experiments conforming to those that I made with oxygen in 1904 In all I killed 43 cats, 17 with the warmed chloroform vapor and 26 with the vapor at the normal temperature The following table shows the results

TIME REQUIRED TO KILL CATS WITH CHLOROFORM AND AIR

Number of the experiment.	Number of minutes required to kill at 100 Fahrenheit.	Number of minutes required to kill at normal temperature.
1	18	4 5
2	57	3
3	26 5	7 5
4	24 5	7
5	15	4
6	16	4
7	15	3 5
8	8	7 5
9	13	9
10	22	5 5
11	12	7
12	17	10
13	21	6
14	25	9
15	27	10
16	17	7 5
17	12	10 5
18		10
19		10
20		17
21		16
22		18
23		16
24		11
25		12
26		12
	17) 346 total	26) 232 5 total.
	Average 20 35 min	Average 8 94+ min.

From this table we see that the vapor, when raised to the temperature of the blood, is almost 2½ times as safe as chloroform vapor as usually administered, and is nearly as safe as chloroform and oxygen, and is safer than ether and air[2] These experiments having been made on animals, it remains to be proved if the same results can be obtained on a human being undergoing a surgical operation The combination of oxygen and warmed chloroform vapor gives us a close approximate to the ideal anesthetic toward which we are gradually working

AUTHOR'S THEORY

As this is the first time in the history of medicine that this comparison, i e, of warm and cold chloroform vapor, has been made, it may not be out of place to give my own theory as to the above

It is an acknowledged fact that, in the tropical climates, chloroform is given with less danger to life In fact, the anesthetic is so volatile that it sometimes becomes necessary to use a more or less closed method By heating the chloroform to 100 F we, as nearly as possible, reproduce the conditions at the equator The vapor is more readily absorbed by the blood, and little or none of the vapor remains in the reserve air in the lungs With chloroform as ordinarily administered, a certain per cent of the vapor remains in this reserve air to be warmed over before it is capable of being absorbed by the blood As long as the vapor remains in the lungs in this way, it is a menace to the life of the patient This itself would be a sufficient reason for administering a warm vapor in preference to a cold one My idea is that after this warm vapor gets in the blood it is also more readily given off, whereas, a cold vapor circulates for an indefinite period In other words, while the chloroform vapor at a higher temperature is more easily absorbed it is also more easily given off

We may liken the warm and cold gases in the blood to a bubble of gas, on the one hand, and a water-soaked log on the other When the warm vapor ches t alveoli of the lungs it immediately esca he cold chloroform reaches the same pl of the water-soaked log and is indifferent to the opening Whether this theory is correct or not, the fact remains that chloroform, heated to the temperature of the blood (100 F) is more respirable, has less after effects and is also less dangerous to life than chloroform as usually administered

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[1] The Journal A. M. A., 1905 Sept. 2 and 9

[2] Gwathmey Medical Record Nov 10

ADVANTAGES OF METHOD

The principal advantages of this method over all others are 1 The administration of known percentages of chloroform or ether, separately or combined, in any desired proportion If a change from one anesthetic to the other is indicated, this is accomplished quickly

2 Elimination for rebreathing and carbon dioxid

3 The ability to maintain the desired level called for by the operation

THE FUTURE OF ANESTHETICS

Attaining full surgical anesthesia or analgesia from scopalamin and morphin is unscientific and will never become a routine procedure But the administration of gr 1/100 scopalamin and gr 1/6 morphin one-half hour before the operation and supplementing this by as much of any general pulmonary anesthetic as may be necessary is theoretically correct and clinically safe This is now the usual method of procedure by some of the attending staff at the General Memorial Hospital in New York City, where they have used this combination over five hundred times with the following results 1, Surgical anesthesia quickly produced, 2, maintained satisfactorily with a minimum amount of the anesthetic (gas-ether being the usual method), 3, the after-effects in over 90 per cent of the cases as to nausea and vomiting are all that could be desired The patient usually sleeps for three or four hours after the operation, but can be aroused at any time

At the Polyclinic Hospital, New York City, we are giving gr 5 of chloretone every 15 minutes until 15 grains are taken before the operation, but we have not sufficient data as yet to report definitely The combination of scopalamin and morphin or chloretone or cocain locally, plus a small amount of some pulmonary anesthetic, will undoubtedly be the anesthetic of the future.

DISCUSSION

Dr W S Bryant, New York City, said that some of his patients had been admirably anesthetized by Dr Gwathmey He thinks the amount of anesthetic given was less than with any other method he has seen used and the supply of oxygen more abundant This accounts for the surprisingly slight disagreeable effects of the anesthetic He has not seen any bad results from the method, either with chloroform or ether or a combination of the two He thinks that this method of giving vapor, and possibly warm vapor, would solve many difficulties in anesthetizing patients whose surgical treatment is seriously handicapped by some general disease.

Dr R. C Myles, New York City, said that this subject has worried and annoyed him more than operations on the throat. Whether he has an expert anesthetist or not, he never can dissociate himself from the responsibility Unfortunately statistics can not be obtained. Those who have lost patients under anesthesia do not give the statistics for publication, they are perfectly willing to confer with one another on the subject, but not with the profession at large in the way of publication He has frequently asked surgeons in different parts of the United States as to deaths from anesthesia, and it is rarely the case that they have not had a fatal accident, but he does not believe that 5 per cent. are reported So the fatality is far beyond what the literature gives. Since Dr Gwathmey has been carrying out this method, Dr Myles has been particularly fascinated with it and has had his assistance a great many times In mastoid operations, especially in cases involving intracranial structures, taking one or two hours, it has been ideal In throat cases it has nearly always acted well. Dr Myles is opposed to chloroform He referred to one of his own cases which Dr Gwathmey mentioned, that of a young girl 8 or 10 years old She was lying on the table with her head over the side and was doing well, when he used scissors to sever the mucous membrane that covers the anterior part of the faucial tonsil, it was a case of submerged tonsils deeply embedded He made two nicks and noticed an instant cessation of everything that tends to life eyeballs rolled up, pupils enlarged, and all the phenomena of death were apparent She gasped and stopped breathing He grasped her by the legs and held her straight in the air while Dr Gwathmey used artificial respiration. It seemed a long time, and three or four times he thought there was no use in keeping it up, but Dr Gwathmey made pressure on the chest and kept her breathing in and out, until finally she gasped and recovered. Nothing but activity caused this patient's recovery The operation was continued, the tonsils and adenoids were removed, and the patient recovered from the operation These experiences which happen so suddenly with chloroform in throat operations are due, he believes, to some disturbance of the respiratory center and caused by the surgeon's manipulations He does not think that they are due to the lymphatics There is some stimulation or activity caused by incising the throat.

Dr L A Coffin, New York City, raised the question whether or not warm ether or warm chloroform vapor can be given It seems to him that by this method of heating the ether or chloroform is caused to vaporize more rapidly, but that the vapor is of the same temperature The heat becomes latent heat The beauty of the method, it seems to him, is in the graduated and certain amount of vapor, of either the ether or chloroform

Dr. W E Casselberry, Chicago, said he experimented in former years in giving nitrous oxid with oxygen and made a preliminary report, but gave it up on account of the complicated technic He asked whether in the method mentioned by Dr Sherman its administration can be interrupted for different stages of a tonsil or adenoid operation, without the patient's coming out from the anesthetic in the course of a few seconds In that operation an interrupted administration is a necessity Concerning chloroform, he emphasized that the safest way to anesthetize for tonsil and adenoid operations is not to give chloroform at all, but to substitute ether for it. Recently, for another purpose, he had occasion to look through his records of private cases and found from 480 tonsil and adenoid operations, a series of 160 cases anesthetized by ether satisfactorily to the operator and to the patient, with no fatality and no cause for anxiety beyond the usual sense of responsibility which pertains to the use of any anesthetic He said that, as regards this new apparatus, it is beautiful to behold and no doubt works perfectly in the hands of Dr Gwathmey, but he has the same objection to it as to many other complicated forms of apparatus It contains screws, valves and a lot of rubber tubing, the screws will rust, the tubing degenerate and the valves stick or leak at critical moments As long as ether can be poured and chloroform dropped out of a bottle on to an ordinary inhaler it will take long to introduce complicated mechanical devices for this purpose

Dr. C M Robertson, Chicago, said he also is afraid of chloroform anesthesia, although he perhaps would venture to use this method He decided against chloroform because of operating after two deaths in the hospital, his operation almost causing a third He has not had an actual death, but pretty nearly so He gives ethyl chlorid gas in a manner that seems almost ideal The gas is put up in metal containers so that the heat of the hand generates the gas in the tube All that is required in giving it to people who can not breathe through the nose is a cheap face mask After the patient is anesthetized a nasal tube is put in the nostril through which the anesthetic is given continuously He has used it for the last eight months in private and hospital practice with no bad results except in one patient who could not breathe on account of having the head thrown back too far There is no cyanosis with this method of anesthesia, the heart is not affected at all, nor is the respiration and it seems better than any form of chloroform he has seen The trouble with ether is, that following some operations, tonsillectomy, for instance, there is a possibility of purging which is likely to start hemorrhage, and that is an objectionable feature

Dr. M. H. Cryer, Philadelphia, spoke in regard to the use of nitrous oxid gas in combination with oxygen. Sir Frederick Hewitt, of London, first devised an apparatus for making this combination and used it very successfully In 1904 Dr Cryer brought one of his apparatus to this country and had it somewhat modified and at the present time it is in general use throughout the United States It is often used to carry the patient into a state of anesthesia before the administration of ether

Dr E F Ingals, Chicago, said that he has used chloroform in these operations several hundred times, and has seen deaths from chloroform but never from these operations Nevertheless, he is not so free in using chloroform as would be supposed from the chairman having called on him in its defense. Many times lately he has given nitrous oxid gas and followed it with ether During his practice he had seen several cases in which chloroform acted badly and he believes that it will have to be abandoned in most of these operations.

Dr J T Gwathmey, New York City, said that nitrous oxid and oxygen gas is unquestionably the safest anesthetic in the world, anybody studying the subject clinically and theoretically knows that. The only question is that so far they have not been able to use it Dr Hewitt acknowledges that it is only applicable to certain cases and on that account has given it up as a routine procedure. Dr Gwathmey said that his own method comes as near nitrous oxid and oxygen gas as anything can The reflexes are barely abolished, the patient is just under, and although given ether continuously, in the majority of cases there is no nausea, or very little In regard to the length of time it takes the patient to come out of the anesthetic, in a case not long ago at one of the largest hospitals in New York, the operation lasted nearly five hours The anesthetic was given by this method and fifteen minutes after the operation was completed the patient was out and talking normally, without any nausea or vomiting For adenoid and tonsil operations in giving ether there is nothing better than this method. Anesthesia is a little deeper than with nitrous oxid and oxygen gas

MEDICAL SPECIALISM, WITH ESPECIAL REFERENCE TO PROCTOLOGY *

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THE GENERAL PRACTITIONER AND THE SPECIALIST

In this age of commercialism the struggle for existence is of the keenest This condition exists in both the business world and in professional life, but especially so in the latter Is it strange, therefore, that the general medical practitioner looks in awe and wonder at the growth of the specialist and the multiplication of the specialties and asks himself What is to become of the family doctor? Or Has my position become that merely of an intelligence office, where the general public can obtain information as to suitable specialists for the treatment of eye ear, nose, throat, stomach, heart, lung, kidney, liver, or other troubles?

Assuming, for the purpose of argument that the objections urged against specialism in medicine are well founded, what would be the result if it were possible to abolish the specialist? Would the best interest of medicine thereby be conserved? Would the general practitioner, in the multiplicity of diseases coming under his notice, be enabled to study the individual characteristics and phases of each complaint with that nicety, care and distinction necessary to permit him to draw conclusions and deductions that would enhance the progress of medicine to the same extent as under existing circumstances? Would the health of the public be cared for as well under such a régime? I firmly believe that no fair-minded person could give other than a negative reply to each of these questions If this be admitted, then, the fact exists that specialists are needed and that specialism in the practice of medicine will grow with the requirements of existing or of future needs and conditions

A well-known Philadelphia physician was testifying in one of the local courts as an expert He was asked if he were a specialist, to which he replied "Thank God, no" When asked what he called himself, he replied "A general practitioner" When asked to explain to the judge and jury the difference between a specialist and a general practitioner, he replied that "it took about a dozen specialists to make one all-round general practitioner of medicine" As a piece of witticism these remarks could not fail of appreciation, but as a statement of fact they hardly would be seriously entertained by any one

THE IDEAL SPECIALIST

It is true that the so-called specialist, who immediately after graduation attempts to pose as an expert in any line of medical practice, will sooner or later bring disgrace on himself and prove a discredit to the profession at large The same remarks apply with equal force to the practitioner who, after some years of general work, attends a postgraduate course for six weeks or thereabouts and then deems himself a full-fledged specialist in the line of work to which his attention has been directed

My opinion of the ideal specialist is one who, on graduation, serves a full-term residency in some general hospital in one of our large cities, then takes up the general practice of his profession with some more or less definite idea that at some time in the future, when his finances and acquaintanceship both among the profession and the laity are sufficient to warrant the step, he will take up whatever special line of work either his own liking dictates or is indicated by the course of events which shape the destiny of most men From five to ten years spent in general practice is none too long for the average individual During that time as much attention as is possible should be given to the study of the diseases to which it is hoped to devote more or less exclusive attention later When it is possible associations should be formed with a specialist, in the desired line, having a hospital position, where as an assistant, much experience may be gained and practical work done After the proper length of time has been spent in gaining the required knowledge and experience in the practice of medicine, in its broadest sense the individual, desirous of specializing his work is prepared to take up the requisite postgraduate instruction At least a year's time should be devoted to this work From half to three quarters of this period may be spent in colleges in this country and the remainder may be employed abroad

To the student of proctology I would advise a division of time so arranged as to enable him to spend a couple of months in each of three or four of the teaching centers of this country In this manner [illegible] only [illegible] variety of work seen, but also the various clinicians with whom he comes in contact impress on him their individuality both in operative technic and treatment

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* President's Address at the Eighth Annual Meeting of the American Proctologic Society held in Boston June 5-6 1906

NEED OF A KNOWLEDGE OF THE SPECIALTIES

The foregoing remarks demonstrate that the profession of medicine and the public welfare are materially benefited by having in the community such practitioners who, at the proper time of their professional career, devote their entire time and attention to the study and treatment of some particular portion of the human economy It is only within recent years that our medical colleges have appreciated the importance of students having at least a rudimentary knowledge of the specialties, such as ophthalmology, otology, laryngology and dermatology, and have required an examination in these branches Those of us who graduated fifteen or twenty years ago can recall the meager attendance of students to these clinics at all times, and in the latter half of the term the professor considered himself, indeed, fortunate if he could secure an attendance in the amphitheater of a half-dozen men

In connection with this teaching of the specialties in our undergraduate colleges I would make two comments First, that the teaching should be done by specialists, and, second, that the teacher should not exact of the student the same profound knowledge of such special subjects as is required for the major branches

PROPER RELATIONS BETWEEN SPECIALISTS AND GENERAL PRACTITIONERS

I will now consider the apparent antagonism on the part of some general practitioners toward the specialist Is this antagonism justifiable? Under certain circumstances the answer must be given in the affirmative There is just cause for complaint on the part of the general practitioner when the specialist exceeds his authority in treating a patient for any trouble other than that for which he was referred Furthermore, one specialist has no right to refer a patient to another specialist without first consulting the family physician Another cause for grievance and the occasion of a drifting apart of the general and the special practitioner is that the public have been educated to seek advice and treatment of a specialist when in their judgment their physical needs require attention, and they do this without even consulting their family physician It is true that the specialist may with propriety treat such patients and ignore the family physician, but is such a course productive of the cordial relationship that should exist between all honorable and regular practitioners of medicine? I think not When a patient presents himself at the office of a specialist, without an introduction from his physician, one of the first questions that should be asked is, "Who referred you?" If it be some one other than the family physician, the next inquiry should be, "Who is your physician?" This should be entered with the patient's history in the proper place, and with the patient's consent, as soon as possible thereafter a note should be sent to the physician stating that such and such a person has been seen and examined, with a report of the facts ascertained Furthermore, any sugestions regarding constitutional treatment should be made to the family physician and left for him to prescribe If this course were followed by all specialists a much more cordial fellowship would soon be recognizable within the rank and file of our profession and a large part of the enmity now evinced by the general practitioner toward the growth of specialism would be forever dissipated

Viewed from my standpoint, the progress of specialism does the general practitioner much more good than harm A single example will have to suffice as an illustration, for time will not permit a thorough consideration of all the features of the subject which would be in order in an extended discussion of the matter Take, for instance, the subject in which the members of this society are chiefly interested Each individual composing the organization comes into daily contact with numerous patients afflicted with some ailment of the alimentary tract, more particularly of that portion of the lower bowel beginning at the sigmoid flexure and terminating at the anus At each annual meeting the individual experiences of one and all of us are given concerning the results obtained from various methods of treatment, original or more extended observations are recorded regarding the pathology, symptomatology, diagnosis and prognosis of the different rectal diseases, instruments are shown of recent device, new operative procedures are described, and any additional information worthy of record is detailed regarding well-known operations All this material as presented by the individual is subjected during its recital to the closest scrutiny by the members collectively, and then is discussed in a frank and fearless manner by the leading proctologists of this country, with but one natural result the speedy separation of the chaff from the wheat

At this point some one may say that all this is true, but what has it to do with indicating the benefits, if any, which accrue to the general practitioner from the growth of specialism? In the first place, all our sessions are open to any members of the medical profession, except that small portion of time which is devoted exclusively to business pertaining to routine matters, necessarily of interest only to members of the society, so that any one of the profession may attend our meetings and freely partake of the bounteous repast of knowledge which there awaits the hungry seeker eager for enlightenment on things proctologic

Furthermore, those unable to attend the meetings have the opportunity of reading in the medical journals the various papers read before the society, as well as a synopsis of the discussions pertaining thereto In this way the general practitioner, if he so desires, may fit himself according to his individual capacity properly to diagnose and to treat diseases of the rectum, even to the performance of operative measures Thus the specialist is largely of benefit to the general practitioner without deriving or seeking any direct personal gain

Let me shift the scene for awhile and express my views briefly as a specialist on the topic, What should be the attitude of the general practitioner toward the reference of cases and consultation with specialists? This is a broad subject, but the question can be answered, somewhat tersely, it is true, by saying By acting honestly to the inner conviction of what is right to one's own interest and at the same time just to the patient's welfare I am glad to say that there are many men whose professional careers are conducted on this principle, but what of the large number who are not animated by such motives? These latter individuals perform major operations with little or no training in surgical work and with a less knowledge of the risks involved to human life If the patient lives, their egotism is increased and their self-importance and esteem made greater When a contrary result ensues there is no lessening of the personal vanity, but the death is attributed to natural causes, which in point of fact it is, but not in the sense of the ordinary acceptance of that term

These remarks are made not because they are agreeable or from any desire to utter disagreeable things, but as they are facts they seem essential as a sort of preface to what I am now about to state These same men who so recklessly perform almost all the operations embodied in the surgical field, and who are never known to require a consultation in a purely medical case, unless the patient is at death's door or is so sick that the patient's family becomes frightened, never attempt the removal of a cataract, and when they have a case of a fractured bone hasten to call in assistance Why? The loss of an eye or an imperfectly set bone, as a rule, does not kill a patient, but it does prove a lasting monument of the lack of a medical man's knowledge, ability and skill

It is true that in the selection of the operation for the extraction of a cataract I may be accused of using a very poor illustration to emphasize the point made, for it is well known that to-day even the most skilled general surgeon refers such patients to the ophthalmologist. Nevertheless, my object is thereby attained of pointing out a condition of affairs which is deplorable and should not exist

CONCLUDING REMARKS

In conclusion permit me to offer a few words of caution and advice, which seem suitable for presentation and consideration in an address of this character In the first place, let us be considerate of the errors in diagnosis made by others which opportunity happens to reveal to us No one is infallible The practitioner who never makes a mistake is either ignorant of its occurrence or else his practice is so limited that he has little opportunity to err A shrug of the shoulder or an elevation of the brow of a physician being consulted may convey to a patient as much condemnation of another physician's former treatment or diagnosis as though the harshest language had actually been used, and, finally, we must not rush into print with articles of a laudatory character, in which, too often, unstinted praise and unmerited recommendation is given to some new drug or novel method of treatment without having had ample experience to justify the same Similar remarks are likewise applicable to those who publish a description of some newly devised operation without having taken the necessary time to test its merits, much less its demerits

The avoidance of these evils, for such we know them to be, will save much unnecessary confusion in the minds of the readers of our medical journals, who today see statements made to this or that effect which tomorrow are contradicted

1610 Arch Street

SURGICAL ASPECTS OF TUBERCULOSIS *

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NEW ORLEANS

By the above title we understand tuberculosis as it presents itself to the surgeon, to that division of the medical body which busies itself with the knife, the brace, the plaster bandage the rubber constrictor, in other words tuberculosis accessible to external means of therapeusis

EXTENT OF THE SURGEON'S DOMAIN

How broad is the field which we are about to survey? What promise does it hold out of opportunity for rendering services of value, for doing work satisfactory to the active and to the passive party?

A brief view of some figures bearing on this matter may be of some interest During the decennium, 1894 to 1903, we find that in the Charity Hospital of New Orleans the prevalence of the pulmonary form, commonly accepted as medical in its aspect, was 4 24 per cent (42 in 1,000) of the total number of patients admitted for the whites, 9 001 per cent. (90 in 1,000) for the colored During the same period the prevalence of surgical forms of tuberculosis was 2 92 per cent. (29 per 1,000) for the white, 3 229 per cent (32 per 1,000) for the colored[1] These figures make the ratio of surgical to medical tuberculosis cases about 1 to 1 5 for the white, about 1 to 2 8 for the colored The greater preponderance of pulmonary cases in the colored may be accounted for by the fact that the members of this race suffering from the pulmonary disease come to the hospital in large numbers to spend their last days on earth, while they seem less inclined to come for the less fatal, though more disabling, local lesions

In Ward 1 of the same hospital, a portion of the service of Dr R Matas, professor of surgery in the Medical Department of the Tulane University of Louisiana, of 149 surgical cases admitted during the six months, October, 1903, to March, 1904, 17 (nearly 12 per cent.) were tuberculous in character These figures, taken from the reports of a general hospital admitting patients regardless of racial considerations or of any considerations other than those of public health, may be assumed to be fairly representative of the conditions existing in this section of the country

When we come to consider the tissues, apparatus, regions and organs presenting work for the surgeon, it seems easier to enumerate the organs not affording opportunity for surgical intervention than to give the long list of those which do Of the connective tissues which form the framework of the human body every element comes within the scope of our sphere of interest and action, fascia, adipose tissues, cartilage, bone, muscles, tendon-sheaths The brain and its meninges, the coverings of the spinal cord, the cerebrospinal nerves, the organs of special sense belong in our domain The pericardium, the blood vessels and, of special importance, the lymphatics and lymphatic glands are amenable to surgical intervention The serous, synovial and mucous membranes do not escape our attention nor are the secreting glands foreign to the subject The digestive apparatus presents the lip, tongue, palate, pharynx, stomach, small intestines, colon, appendix and liver, the respiratory apparatus, the larynx, trachea and pleura, the genitourinary apparatus is ours in its entire extent, including kidney, ureter, bladder, urethra, prostate, vesicles, cord, testis, vulva vagina, uterus, tubes, ovaries, mammary gland Every region presents some lesions for which surgical therapeutics of one kind or another are indicated To sum up one may say that every portion of the body is affected with tuberculosis of what we may call the surgical type with the exception of the heart the spinal cord the lungs and bronchi the spleen and the pancreas Even these organs are not all free from surgical intervention fc [illegible] s as lit-

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* Read before the Mississippi State Medical Association April 1906

[1] Gessner Hermann B Impo [illegible] rculosis to the General Practitioner" New [illegible] Jr September 1904

erature records the successful draining of pulmonary cavities of tuberculous origin A more thorough review of the subject might show that others of the exceptions given should be included in our list of organs requiring surgical intervention for tuberculosis

It must not be forgotten in taking this survey of the field that some of the tissues mentioned are but rarely involved Up to a recent period the peripheral nerves have been thought to be immune During the past winter Professor Matas has had occasion to bring before the medical class of Tulane a case of ulnar nerve tuberculosis, besides encountering a similar case in his private practice Again, the stomach is rarely the seat of tuberculous lesions, its secretion apparently protecting it against the local development of tubercle bacilli The pericardium is not frequently the object of our attentions, though I have had the opportunity of tapping this sac for a serous effusion secondary to a pleural exudate, withdrawing two ounces on one and seven ounces on another occasion

The conclusion to which we finally come is that there is not a region of the body, not a tissue nor any organ, which we may say positively can not be the seat of tuberculosis, and further that with improved technic there is scarcely a lesion that can be considered outside the domain of the surgeon The rare tuberculous lesions of the endocardium are safe from his reach, as would be similar lesions of the large vessels, did they occur primarily But anything short of these impossible heights may be reached by persistent effort Let the surgeon, therefore, keep tuberculosis ever before him as a possibility lest he have the humiliating experience of attempting the removal of a lipoma from the back and finding a cold abscess or discovering that a supposed sebaceous cyst over the eyebrow is in reality a tuberculous collection originating from the dura and perforating the frontal.

DIAGNOSIS AND PROGNOSIS

Of diagnosis I shall say little, this aspect having been pretty well crystallized in the literature The slow onset, the painless, afebrile character of the lesion, combined with the information derived from the use of the exploring needle and the results of examination of the fluid by staining, culture and inoculation, make the recognition of tuberculous diseases in most cases a matter of only ordinary difficulty The use of tuberculin, about which much has been written pro and con, has, in my hands, proved serviceable for clearing up diagnoses Care must be taken to avoid excessive doses, the limits recommended by the manufacturer being observed

In regard to prognosis I must declare myself frankly optimistic Given a patient with a single lesion, offering good opportunity for radical extirpation, and the chances of ultimate recovery are excellent. Autopsy records show that, with extensive local trouble amenable to surgical intervention, there may be perfectly sound viscera, the disease in such instances progressing by continuity and contiguity only without metastatic deposits through the lymph or blood channels Just as the prognosis of pulmonary tuberculosis has improved under modern methods of early diagnosis and prompt treatment so with the surgical side of the disease, which being more accessible ought to be even more favorable for recovery

TREATMENT

The treatment of surgical tuberculosis is so well known that I will not dwell on it at length Rest, general and local, the latter secured by proper methods of immobilization, aspiration, injection, excision are all too familiar to require being expatiated on. I pause only to impress on you the desirability of making a clean sweep, of practicing radical excision in all cases in which this is feasible, in preference to employing the slower method of aspiration and injection I refer, of course, to those cases in which the disease has progressed to the point of destruction of tissue, to caseation and liquefaction

I should like to call attention to the Bier method of congestion, which, though not new, has recently been taken up with renewed vigor . In the Charity Hospital service of Professor Rudolph Matas, the treatment has been applied of late to diseased joints with very satisfactory results By no means should we slight the improvement of patients' general health by the well-known hygienic means of sunlight and fresh air, with properly directed exercise. Nor should we overlook the specific medication by means of culture and serum preparations, one of which, let us hope, will some day prove to be the long-sought-for boon The use of the hygienic means referred to, together with the watery extract of tubercle bacilli, has enabled our Louisiana Tuberculosis Sanitarium, conducted by Dr W J Durel at Covington, La, to get excellent results and establish a high reputation

In summing up, we arrive at these conclusions

1 Tuberculosis is of interest to the surgeon because it affects practically every region of the body with sufficient frequency to require that he be ever on the lookout for it

2 Early recognized and promptly treated, the surgical form is as amenable to treatment as any class of lesions with which we are confronted

1528 Louisiana Avenue

TESTIMONY AND EVIDENCE IN MEDICINE

M L. HARRIS, M.D
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I have deviated somewhat from the custom of my predecessors of presenting some purely surgical subject for your consideration in order to take up a matter of a more abstract nature, yet one which I believe to be of the greatest practical importance, and one too often neglected by most physicians I refer to the question of testimony and evidence in medicine

In the legal profession the questions of testimony and evidence, in so far as they relate to human affairs, have been very thoroughly studied, and more or less fixed rules governing them have been adopted The value of testimony and the weight to be attached to evidence in the formation of conclusions are all elaborately dealt with, but the physician dealing habitually with questions of life and death too often fails to apply the most common rules of logic to his reasoning, with the result that his deductions are often entirely unwarranted by the premises, and therefore frequently erroneous Many of the errors of judgment made by physicians will be found on analysis to be due not so much to an actual lack of knowledge of the subject as to the fact that they are based on testimony that is unreliable and evidence that is insufficient

Notwithstanding the fact that their daily life is made up of listening to testimony and to the weighing of evidence, yet the majority of physicians fail absolutely to comprehend the meaning of these two terms, and to understand wherein the one differs from the other

WHAT IS TESTIMONY?

Testimony is that which is derived from an individual who in medicine is usually the patient and corresponds to what is called the history of the case, as given by the patient or some other person Belief in human testimony is a fundamental principle of our moral nature, and in law is the very basis of evidence An instinctive leaning or propensity to speak the truth is inborn in our nature, and by Reid, in his "Inquiry Into the Human Mind," this is recognized as the "principle of veracity"

The very nature of the case in all times and in all courts of law has given to the communications between the patient and the physician, from whom he seeks relief from his sufferings, the highest degree of credibility, yet every physician of experience knows that the testimony of the patient is but too often in the highest degree unreliable This is not a denial of the principle of veracity, but an attempt to differentiate sharply between that which is truthfully told and the truth of that which is told A patient may never be so truthful and relate nothing but what he believes to be the truth, but the physician must discriminate very carefully between what the patient believes to be true and the facts as they really exist

There are many reasons why a truthful statement by the patient may not state the truth In the first place the majority of individuals are very poor observers, and particularly so when it concerns a matter about which they know but little Imperfect observation or perceptions leads to erroneous concepts, and although a patient's statement may truthfully depict his perceptions and conceptions, if these be erroneous his testimony contains untruths Aside then from those patients who are mentally irresponsible, from those who wilfully attempt to deceive, and from those who are unconsciously biased on account of contingent personal benefits at stake, which will be considered later, the physician must recognize the possibility of error in the testimony of those who have every reason and intention to be honest

Therefore, in receiving knowledge of facts from the testimony of others, one should be influenced by their accordance with facts previously known or believed, and this constitutes what is termed their probability, but in being influenced one must guard against two sources of error, namely unbounded credulity and unyielding skepticism, for the former is the attribute of a weak mind, which seldom thinks or reasons, while the latter belongs to those who find nothing probable beyond their own limited field of observation and experience That those things which accord with one's own observations are more readily believed than those which do not, is natural, and thus the value of a wide experience becomes evident, for, as Abercombie has well said

> The progress in knowledge is not confined in its results to the mere facts which we acquire, but has influence in enlarging the mind for the further reception of truth, and sets it free from prejudice which influences men whose minds are limited by a narrow field of observation

EVIDENCE LEGAL AND SCIENTIFIC

Testimony and evidence are by no means the same There may be a great deal of testimony yet very little evidence By evidence is meant "the means by which any alleged matter of fact the truth of which is submitted to investigation is established or disproved" This is the legal definition and indicates its origin by containing hidden within it a description of the method of procedure in law An "alleged matter of fact" is presented in the form of a conclusion which is assumed to be true, and an attempt is then made to bring forward sufficient evidence in support of the assumed facts as will ordinarily satisfy an unprejudiced mind beyond reasonable doubt of their truth In other words, the conclusion is presented first and the evidence made to fit the conclusion While this method of procedure may be applicable to the ordinary affairs of men it is most fallacious when applied to medicine or other natural phenomena

A definition which conveys a better idea of the meaning of evidence, as applied to medicine or the investigation of natural phenomena is, that evidence is any fact which, when presented to the mind, effects or tends to effect a conviction concerning the existence of some other fact This does not presuppose nor assume any certain conclusion, but leaves the conclusion to be that which the evidence warrants The value of the evidence in establishing the facts as such in any particular case varies greatly

PROOF

When the evidence is positive, direct and complete it amounts to proof Proof, therefore, is not synonymous with evidence, for the latter is the means or medium by which truth is established, while the former is the effect or the end result of evidence The evidence may be sufficient to amount to proof, when a conclusion is warranted, or it may be so insufficient as to render any conclusion absolutely unjustifiable It is the natural tendency of the untrained mind to reach conclusions on entirely insufficient evidence, while the trained mind will recognize consistency and truth when a less experienced one will disbelieve

The ability to deduce a correct conclusion does not depend entirely on the known terms of the premises, but also on the readiness with which one appreciates or comprehends the equality or inequality, or the similarity or dissimilarity, between the known and the inferred terms When the savage, by observing a few signs, the mere existence of which is almost invisible to the untrained eye, is able to assert with certainty that a definite number of white men known as soldiers were present at that particular spot at a certain definite time past, and that they came from one direction and departed in another, he is displaying the most perfect logic possible, because from a few known facts he is correctly inferring a large number of unknown facts the latter being necessary dependencies of the former

THE PHYSICIAN AND LOGIC

Logic is the most abstract of objective sciences, and treats of the necessary dependencies of things The average physician knows too little about logic. He is not trained in giving to evidence its proper weight, he does not sufficiently recognize that there must be equality between the terms of the conclusion and those of the premises, and that in just so much as these terms deviate from perfect equality does the conclusion lack in certainty or inevitability In mathematics the conclusions are positive and absolute, but in medicine it is very rarely that they obtain such a high degree of certainty It should be the duty of the physician however to give to his conclusions the highest degree of probability possible under the circumstances and this can only be done by strictly applying to his work the sound rules and principles of logic A large part of a physician's life is spent in listening to testimony yet how seldom does he ask himself, How much credence should be given to these statements? How much of this or that is true, and how much is false, not false in the sense of willful deception, but false for the reasons already mentioned, unintentional errors?

PRESUMPTIVE EVIDENCE

The fact that the patient comes to the physician suffering from some ailment from which he desires relief, and that this can best be obtained by acquainting him with all the circumstances connected with the case, is presumptive evidence of the truthfulness of his statements Yet it is only a presumption

In law two kinds of presumptions are recognized, namely Conclusive presumptions, or those which do not admit of proof to the contrary and which include a variety of conditions not pertinent to our subject, and disputable presumptions, wherein one condition is usually found by experience to accompany or succeed the other, so that when the one is recognized as present the other may be presumed to exist The relations between the two, however, is not an absolute or necessary one, and the presumption thus raised can be held only until some proof is given in rebuttal

Most of the testimony of patients is presumptive evidence of the disputable variety, and, while the presumption is usually that the statements made are true, this is by no means always the case For instance, in the case of a young unmarried woman with suppression of menstruation and an enlarging abdomen, experience has shown that the incentive to mislead is so great that the presumption is entirely in favor of the testimony being false Also in that large class of personal-injury cases in which monetary compensation is sought, a large experience involving thousands of cases has convinced me beyond a doubt that much of the testimony in this class of cases is presumptively untrue, and that it can only be believed when substantiated by correlated facts These conditions should be recognized by the physician in order not to be misled by statements which he receives from the patient

It is a well-recognized principle of the law of evidence that the facts from which an inference is to be drawn must be proved by direct evidence and not to be presumed or inferred In other words, a conclusion can not be legitimately based on presumptions or inferences A violation of this principle by the physician is frequently seen, and numerous errors in the way of faulty conclusions are the result

AN ILLUSTRATION AND ITS ANALYSIS

How an erroneous conclusion may be formed from inferences is shown by the following example from actual experience A man meets with an accident, fracturing his leg After the usual period of confinement to bed he gets around on crutches and then without them, and makes a recovery in the average time, but although he recovers from the fracture he does not feel that everything is just right with him and in two or three months after getting around he consults a physician, who discovers he has tabes He states that previous to the accident he was perfectly well and did not notice any symptoms until after he began getting around The circumstances here of a history of previous good health, of an accident producing a distinct physical injury with the appearance subsequently of tabes lead to the conclusion that the tabes is the direct result of the injury

Let us analyze this case, which is a very common one in principle and see if the conclusion is warranted by the evidence The first point to be considered is the patient's statement that he was in good health and showed no symptoms of tabes previously to the injury He may even show that he had been accepted for life insurance after having passed a satisfactory medical examination but a short time before he was injured Granting that the patient is perfectly honest and states only what he believes to be true, how much value should be placed on this statement as evidence? Has it the value of presumptive evidence, or, in other words, is it in all probability a statement of the facts? I claim that it is not, and for the following reasons

Tabes is frequently extremely slow in its onset, and its earliest manifestations are so insidious as to be unrecognized by the patient, for the reason that they may give rise to no subjective disturbances whatsoever In fact it is very probable that the earliest manifestations of tabes are only recognizable objectively, and by one who is perfectly familiar with them as well as with the methods of eliciting them In any case, therefore, of evident tabes, the patient's statement that certain manifestations were not present at any reasonable time antecedent to the event in question, can have very little, or no weight, as evidence In fact, it is highly probable that the statement in this particular is false. To assume his previous good health is therefore purely a presumption, and, as already said, no inference can be based on presumption

If now it appear that the patient is prosecuting a suit for personal damages for his injury and its alleged consequences it at once becomes evident that his statements regarding symptoms of tabes previously to his injury not only can not have any positive value, but are really presumably false If we analyze further we learn that the real cause of tabes is unknown, and that even those who are most familiar with it do not agree in all particulars as to its essential nature It is impossible to establish a causal relation between two terms when the essential nature and necessary antecedents of the second of them are absolutely unknown The conclusion, therefore, that the tabes followed the injury as a necessary dependent is without the slightest justification It has never been proven that an injury or physical trauma can produce the symptoms and changes characteristic of tabes, while it is a daily observation that the latter condition is constantly met without there being the slightest suspicion of an injury ever having entered into the history

It is very evident then that trauma can not be held to be a necessary antecedent of tabes, nor is there any basis in reason for even inferring a causal relation between the two The fact that the evidences of tabes may become rapidly manifest subsequently to an injury is no reason for assuming that the injury acted as a cause, or even hastened the advance of the condition

It is perfectly well known that an individual may be subjectively in good health, yet a careful examination will show that numerous defects are present, which defects have remained unnoticed by the individual, owing to the fact that they have been compensated for, or the defective functions vicariously performed, or the individual's preoccupation along other lines has temporarily excluded from consciousness the impressions produced by the defects Let now any event markedly disturb the equilibrium of the individual's existence, and the defects may become rapidly manifest, yet there will be no causal relation whatsoever between the disturbing element and the particular manifestations which become apparent

The mere fact that the manifestations subjectively followed the alleged antecedent in question furnishes no ground for inferring a causal relation between the two, in fact, no such inference can have the slightest justification unless it can be shown by direct evidence that the said manifestations are the necessary dependencies of the said antecedents The consequences need not necessarily be immediate, but if mediate, continuity consecutiveness and concatenation must be shown In the case under discussion these things can not be shown The conclusion then that the tabes is the result of the injury received is without the slightest justification, as it rests entirely on assumption and inference

DIAGNOSIS SHOULD BE BASED ON EVIDENCE

Every diagnosis is, or should be, a conclusion based on evidence, yet how often do we find when the rules of logic are applied that the diagnosis, instead of resting on evidence, rests on assumption and inference This is due to the fact that the majority of physicians in their ratiocinations fail to distinguish between assumption, inference and fact An assumption is that which is taken for granted—that which is accepted as true without evidence—while an inference is the result of a ratiocination based on a certain amount of evidence The difference between an inference and a conclusion is that the former is drawn from the appearances of things, is partial and indecisive, and pertains to particular circumstances, while a conclusion is drawn from real facts, is full, decisive and conclusive, and expresses the necessary dependencies of the premises

The difference between an assumption, an inference and a conclusion may be well illustrated, as follows A patient presents himself suffering of a disease of one kidney, which may require removal The question which immediately presents itself is, Has the patient two kidneys? Omitting the preliminaries of the mental process for brevity's sake, the proposition may be stated in this manner

Most men have two kidneys
This is a man
Therefore, this man has two kidneys

It will be seen that the major premise contains the word most, which at once subdivides men into at least two classes while the minor premise contains nothing whatever which indicates to which class the particular man belongs Therefore no conclusion can be drawn, and when it is accepted that this particular man has two kidneys it is a pure assumption If, however, by the use of the segregator or ureteral catheter, urine be collected in the two vials, some evidence is present on which may be based an inference that the patient has two kidneys If in addition to the mere collection of separate urines the urines be noted to drop in a normal intermittent or perhaps alternating manner, if one be markedly bloody while the other is perfectly clear, or if on analysis the composition of the one differs so greatly from that of the other as to make it impossible that both could have come from the same organ, then the conclusion is warranted that two kidneys exist in the particular man in question, and this fact may now be used in arriving at any further conclusions regarding for example, the proper course to pursue Thus it becomes self evident that a conclusion cannot be based on an assumption or an inference but must rest on the facts themselves

Medicine is a science and the statement is not invalidated simply because most yes the large majority of the facts pertaining to it are unknown No science is complete in the sense that all the facts pertaining to it are known

During the development of any science or of a theory it frequently becomes necessary to assume the existence of certain conditions or relations as a working basis, but it should be remembered that all deductions made from such assumptions are purely hypotheses, and are but the scaffold which supports the workmen during the building of the permanent structure

In medicine there are many hypotheses which are of the greatest value in enabling us to develop the facts but when we come to the practical application of our knowledge to the individual case, or to the giving of testimony before courts and juries, we should learn to recognize and to distinguish the assumed, the inferred and the hypothetic, so as to confine ourselves to the known facts and the warrantable conclusions deviate therefrom

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NATIONAL SUPERVISION AND STANDARDIZATION OF FOOD *

H. L E JOHNSON, M.D
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The relation of pure food to the health of a nation is equally important with good government of a nation Each year shows not only an increase in the efforts of hygienists and governments to protect the individual in the matter of his food, but also the slow but steady progress of food-producing and controlling corporations in their adulterating, embalming, misbranding and counterfeiting processes, culminating in the disgusting and nauseating revelations of the past few months, which have shaken faith throughout the civilized world in the purity of almost every article of food and drink

Proprietary drug compounds are, in many instances, either inert, wholly false in their claimed composition, dangerous to health or habit producing Under various names they are hawked about, through a variety of methods, leaving in their wake disappointment, poverty, complicated illnesses habitués and mental wrecks

Wealth, greed of the tariff-protected corporations and their almost unlimited opportunities for fraud give birth to these abuses Ignorance on the part of the laity of the facts, or lack of appreciation of the health effects, together with the failure of the physicians and hygienists to educate the public in these matters fosters this state of affairs Publicity is the potent remedy for these evils

The food of a nation should be as genuine as the nation's bond and currency Counterfeiting of either should be a *felony, and as such should be severely punished*

Because of its application to present conditions I quote from the report[1] of the committee of the Pan-American Medical Congress on "Department of Public Health for the United States," adopted at Mexico City, Mexico November, 1896 the following

'We further recommend

"The passage of uniform national and state laws regulating the importation exportation sale inspection and standard of meats, fruits, and food stuffs water supply ice milk and beverages, prohibiting adulteration and providing adequate penalty for violation

"The passage of uniform national and state laws regulating the manufacture importation, exportation, and sale of drugs and chemicals, with provision for their inspection, and penalties for their adulteration. And a further provision requiring the labeling with exact formula of all proprietary medicines and compounds, and providing penalties for violation.

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* Read before the Section on State Medicine British Medical Association Toronto Canada Aug 24 1906

[1] For full report see U S Senate document No 25 Fifty fifth Congress first session

"The passage of uniform laws, national and state, regulating the sanitation of railroad cars, both steam and street, barges and ships, steam and sail, public vehicles, ambulances, laundries, slaughter houses, morgues, hospitals and dispensaries, jails and reformatory institutions, with penalties for violation.

"The passage of uniform laws, national and state, regulating the hygienic management of contagious diseases, personal and house quarantine, vaccination, hygiene of dentistry, barber shops, public baths and gymnasiums, amusement halls, migration of tramps and profligate persons, disposal of dead bodies, garbage and sewage, draining of land, and removal of weeds and decaying vegetation, and providing penalties for violation.

"The passage of uniform laws, national and state, providing for and regulating disinfecting plants, steam, dry heat, and chemical, for mails, foreign and domestic, clothing bedding, money, persons, etc. Bacteriologic laboratories, animal industry and inspection plants, state and national hospitals, and retreats or sanitariums for the treatment of habitués, inebriates, venereal, tubercular and insane persons, with special laws for commitment to and discharge from the same. District nursing for the poor, sick, obstetrical, contagious diseases, etc.

"The passage of uniform laws, national and state, providing for the appointment of state and national medical experts and the punishment of medical crimes.

"The passage of uniform laws, national and state, regulating state and interstate medical, surgical, and dental practice, which will protect the same as a science and not as a trade.

"We further recommend adequate appropriation of money by the several states and the general government for the scientific investigation of public health matters in this and foreign countries, and the suppression of diseases, endemic and epidemic.

"We further recommend that appointment to and the tenure of medical offices shall depend upon professional ability and efficiency, and not on political influence.

"Henry L. E. Johnson, M.D.
"President Committee on Department of Public Health."

The health of the public, through an appropriate department of the government, should be efficiently protected, and all food, beverages, drugs and drug compounds, their preparation, preservation, storage and sale should be standardized and regulated. International standardization should and can be made universal by treaty with the several powers.

Opposition to standardization and control emanates principally from the large dividend-paying, tariff-protected corporations, who, when reforms are urged, make their usual threat—"To increase the cost to the consumers"—and in other ways obstruct and defeat proposed remedial legislation.

Cold-storage foods, undrawn poultry, canned goods and meat packers' productions offer a broad field for medical and hygienic investigation, for determining food etiology and placing responsibility, in connection with the alarming increase in intestinal diseases, deaths from appendicitis and the so-called "acute indigestion." A few successful legal actions, civil or criminal, based on established bad food causation of illness or death, would promptly drive disease-producing foods from the market.

From a politico-industrial point of view, the recent legislation in "the states" providing for pure food and meat inspection is excellent so far as it goes but from a medico-hygienic standpoint, is not entirely efficient or satisfactory as it tends to conserve the financial interests of the producer and jeopardize the health of the consumer by delaying the operation of the food bill and by omitting the date of slaughter, production and inspection from the government certificate or label, thereby placing an immense quantity of meat and meat products, prepared under presumably careless and objectionable methods, now in cold storage or warehouse, on an equality with, and indistinguishable from, recent products prepared under careful government supervision. An identical inspection stamp or certificate will be placed alike on meat slaughtered 5 years and that slaughtered one month, without any distinguishing marks to guide the innocent purchaser. Thus, the consumer is deprived of his right of selection, choice, and exact knowledge of meat and meat products, by the absence of dates of slaughter and inspection. Meat slaughtered and kept in cold storage five or ten years may be wholesome at the time of inspection, but how much longer will it keep so? The government's certificate given in such cases is legally final, but such a guarantee is at least doubtful as to healthfulness.

The American people contributing this year, from their tax funds, the vast sum of $3,000,000 to enforce this special legislation, designed to correct inexcusable irregularities of meat-producing corporations, should have, irrespective of political faith, supported the demands of their President, and insisted on further protection of their health, through adequate inspection, dating certificates or labels, and severe penalties for violations.

WHAT EFFECTIVE MEASURES ARE THERE FOR THE PREVENTION OF THE SPREAD OF SYPHILIS AND THE INCREASE OF PROSTITUTION?*

CHARLES GREENE CUMSTON, M.D.
BOSTON

It is not to be supposed that there exists at the present time a single moralist sufficiently severe, or rather insufficiently enlightened, who would dare to doubt the necessity of measures capable of combating the propagation of venereal diseases. Fortunately, the time has past when syphilis was believed to be the unique result of depravation and was considered as the legitimate punishment of debauch. The numerous sources of infection are too well known at the present time to uphold the old rigorous theories and to these I shall not revert.

Of all the diseases which may affect the human race by contagion and which bring about the greatest disasters to society in general, there is not one more serious, more dangerous, or more to be feared than syphilis. This, I believe, is generally admitted, and since this is the case, why should not the proper authority profit by the knowledge that the progress of science dictates? Many years ago Michael Lévy said "The extirpation of this leprosy of our time that is called syphilis, is not above the power of governments. The sequestration and leproseries put an end to the old scourge, leprosy, this plague has been the object of an extensive and expensive prophylactic control, every nation has made sacrifices to do away with the germs of smallpox, yet syphilis has caused more harm than all these diseases put together. It silently deteriorates generation after generation, its contagion is more evident than that of the plague, why are not the same barriers and the same means of extinction built up in all countries? Such is the human race, the lightning of insolate epidemics which pass over our heads like an electric cloud benumb and frighten people, they endeavor to prevent their return, while they become familiar with the slow and continued plagues which they carry in their flanks and which cause them to undergo hereditary ravage with the same patience that they show toward meteoric phenomena"

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* Read in the Section on Hygiene and Sanitary Science of the American Medical Association at the Fifty-seventh Annual Session June, 1906.

INTERNATIONAL PROPHYLAXIS

Syphilis is not, like smallpox, a disease whose miasms disseminate contagions to the distant parts, neither is it like any of the exanthemata, susceptible of producing itself spontaneously, alone, immediate contact produces its development Its extinction, although difficult, is not a chimerical dream, and if all nations would some day establish a complete system of international prophylaxis, much could be done for suffering humanity

The word progress is on everyone's lips and modern civilization is justly proud of its numerous conquests Scurvy has disappeared from those localities where it formerly reigned endemically, vaccination has stopped the ravages of smallpox, but syphilis still continues to be propagated and for centuries has not ceased to eat the limbs of the human race Leprosy has been practically done away with, why should it not be the same for syphilis?

Here, however, I would say, I do not harbor too great an illusion If the extinction of syphilis is not theoretically a dream, the universal consensus of opinion of all governments is that, in the present condition of society, it is a pure utopia In point of fact, nations vary in character as do individuals, and a kind of mutual and systematic opposition is constantly present acting as an obstacle to their united action and it is to feared that this antagonism by continuing, will, for many years to come, offer a great resistance to the realization of any united efforts If, at present, much has been done to prevent the extension of syphilis and other venereal disease, it nevertheless remains a glaring fact that there is still much to be done and that the large majority of prophylactic means now existing requires great modification

MEANS OF PREVENTING DISSEMINATION OF SYPHILIS

One of the most important means at our disposal for reducing the increase and spread of syphilis certainly resides in hospitalization, to which I shall now briefly refer Formerly, all cases of infectious fever were placed in a common ward, but to-day all our modern hospitals have special wards or buildings reserved for diphtheria, scarlet fever, measles, etc What has been done for acute infections is being attempted in chronic infections and for a number of years back we have watched the development of special hospitals, or sanitoria for tuberculosis No matter what may be the divergence of opinion existing relative to these establishments and the results which may be obtained, it is nevertheless true that it was to this prophylactic procedure that the ancients were able to attenuate if not to cause completely to disappear, the hideous disease that leprosy was in former years

Among those essentially contagious diseases, which should receive the attention of modern prophylaxis and hygiene, venereal diseases should certainly be given a distinct and separate place No one to-day would dare to uphold that the ills produced by the pathogenic agents of these diseases are not at least quite as considerable as those of tuberculosis, for example I do not believe that I am going too far when I say that gonorrhea in the female is grave, prodigiously grave and that it may be considered as the most fearful wound in young households As to syphilis with its high death rate and infantile malformations, with the disasters that it produces in certain individuals, with the fearful affections whose eclosion it favors and, although they bear the special name of parasyphilitic, which are none less attributable to it, we will not insist on this phase of the question

Prophylaxis consequently has the imperious duty of considering these diseases, and among the arms which it has is certainly hospitalization And in the first place, let me say that I disagree completely with those who will not recognize an autonomy in venereal diseases, which I do not believe can be refused them, those who in principle believe that these patients should be placed in general medical or surgical wards corresponding to their cases, such as, for instance, urethritides and gonorrheal vaginitides in a service of genitourinary surgery, mucous patches, cutaneous manifestations of syphilis and chancroid ulcerations in the service of the dermatologist, etc In a word, I believe in special hospitalization for the simple reason that the end to be attained is prophylaxis and the first condition to fulfill with this end in view when dealing with venereal disease is isolation of the patients Until this is done hospital treatment will remain completely ineffectual This does not mean that I believe that hospitalization is in itself sufficient to furnish the solution of such a complex problem as venereal prophylaxis If venereal diseases may be compared to infectious diseases on account of the factor contagion which is common to both, and if we eliminate extragenital infections, which, for that matter, represent a very small portion of cases, it must be recognized that they differ by the manner of contagion While infectious diseases generally take on the epidemic type, while they may seize on an individual who is endeavoring to defend himself against them, venereal affections never assume the epidemic type and only exceptionally seize on an individual, who, knowing them fully, does what is necessary to avoid them As has already been done by a number of authorities, we might possibly designate as epidemics those instances in which infection of a large number of healthy individuals has taken place from a single infected subject Military surgeons, especially those belonging to small garrisons, have frequently noted the contamination of a large number of soldiers from a single woman

This classification I do not wish to make, believing that it is merely a simple way of looking at things, original without a doubt, but susceptible of much discussion Is it because venereal diseases are not contagious in the same way as eruptive fevers, or because their mode of contagion is nearly always genital, that we are led to consider an entire group of diseases for which hospitalization is useless, or merely of a temporary nature? These patients might very well be kept temporarily in a hospital, for a time just sufficient to initiate them into the manner of treatment that they should follow and to teach them to conform rigorously to the rules of general hygiene, which are so important in the treatment of their disease It is for this reason that in the case of syphilitics I believe that it would be well to detain them in a hospital for a few days with their consent when they come to consult for the first time and after their discharge from the wards they may continue the treatment in an out-patient department

Beside voluntary hospitalization—and from a theoretical viewpoint hospitalization should be made obligatory—for those who are perfectly aware of the danger of their disease and who do not hesitate to communicate to others the affection of which they are possessed—howpitalization should be made obligatory for those individuals who are voluntarily contagious There would probably be no division of opinion on this subject in the medical profession if such measures could be applied to the male as well as to the female It would be quite as justifiable and legal as the modern means of prophylaxis in the case of other infections, such, for example, as the quarantine imposed on ships, or the establishment of a sanitary cordon and so forth Although a contagious venereal subject can not be held by obligatory hospitalization, there is, however, a class, which I believe should be compelled to submit to it, I refer to prostitutes This measure has been considered arbitrary, illegal and inhuman and certain people believe that prostitutes should be free to enter a hospital or not as they see fit This question has given rise to long and ardent discussions to which I will not refer It seems to me, however, that the only way to control the transmission of syphilis is to sterilize prostitution as we would sterilize our dressings for a surgical operation, and could this be accomplished the gonococcus and *Spirochæta pallida* would, to a great extent, be removed from the list of pathogenic organisms

I shall here ask to be permitted to make one reflection, namely, Who is the most guilty from the view point of propagation of venereal diseases, man or woman? I have no hesitancy in believing that it is the woman, and for these reasons For example, a man contracts syphilis Where does he contract it? Why, from contact with a female, who, from the very fact that she entered into relations with him, leads an active genital life To whom will the man transmit it? Evidently to another woman, who, just like the first, is also leading an active genital life Thus, the infection being contracted from one woman returns to another woman And this woman, what is she? An avowed prostitute only rarely, statistics proves this, far more frequently she is a clandestine prostitute, and to this class I shall not refer It occasionally also is a girl who has recently fallen, contaminated by her first lover, and who, forced by an exaggerated sexual instinct, or by misery, is perhaps called on to descend one or more rounds of the ladder of vice In other words, no matter what may be the cause of her fall she nevertheless becomes a candidate for prostitution This reasoning may appear on the surface as a mere sophism, but in reality it is not so, because in the male no homologous condition is to be found like that of prostitution in the female

PROPER EDUCATION OF BOTH SEXES

Another and most excellent measure for the prevention of both venereal diseases and prostitution is the proper education of young people of both sexes in sexual matters and many excellent contributions to this subject have appeared of late To mention the various writers who have advised this very common-sense course would take too long and I would merely refer here to two recent articles, the first from the pen of Prince Morrow[1] and one by F Valentine[2] The former writer says that the general principle laid down that the education of the public is the most valuable of all measures for the prevention of communicable diseases Its importance is emphasized in the case of diseases the communication of which lies entirely within the control of the individual The object of the proposed education is to give the youth of this country a clear comprehension of certain physiologic truths which have a direct bearing on the regulation of their sexual lives and of the serious consequences in the shape of disease and death which follow a breach of hygienic laws In other words, it is intended to teach them how to live according to the laws of a healthy nature This instruction in the physiology and hygiene of the sex function should form an essential integral part of the education of youth

Dr Morrow criticises our present educational system, the policy of which is to launch the young into the world in complete ignorance of everything pertaining to the laws of life reproduction In seeking this knowledge the youth is but obeying the law of his mental evolution Since this knowledge can not be had from legitimate sources—parents and instructors—it is gained surreptitiously and usually from depraved sources, dissolute companions or erotic or quackish literature To be salutary as a safeguard, therefore, this hygienic education should be given in youth for it is during this period that the foundations of what may be termed the sexual character are laid and habits of mind and practices are formed which, in great measure, determine the future sexual life of the individual

Valentine concludes his most interesting paper thus

> Sexual physiology and hygiene need not be formally taught girls, save in the exceptional instances in which the genesic impulse is prematurely developed Sexual physiology and hygiene should be taught every boy, when mental and sexual puberty make him capable of beneficially utilizing the knowledge The nature and scope of instruction on sexual subjects should be regulated according to each pupil's ability properly to appreciate the warnings inseparable therefrom

The age at which a person may safely be instructed in sexual subjects is that age at which, in each individual case, such instruction becomes necessary for the purpose of moral and physical prophylaxis The individuality of the parent, physician or teacher should be the guide to the choice of one or the other as the exponent of the facts

Educational institutions may be utilized for instruction in sexual subjects, but such instruction must be given to small groups of pupils selected because of their mental parity as nearly as may be

Text-books on elementary hygiene should not contain chapters on sexual physiology Those charged with imparting instruction or sexual subjects should be provided with separately printed chapters on the physiology and hygiene of these matters These separately printed chapters could then be given with the greatest discretion to such pupils only whose mental development would preclude their misusing the information derived therefrom

All instruction to the laity on sexual subjects should be directed essentially to serve as a groundwork for the following ideas

(a) Many learned men hold that ante-nuptial coitus is not necessary for the health of the individual

(b) Continence reduces the sexual desire

(c) Gratification of the sexual impulse before marriage degrades the moral tone and exposes to serious infection

(d) Venereal diseases are not disgraceful infections, but the result of unfortunate lack of self-control

(e) The greatest danger at the inception of venereal diseases is in their being maltreated by quacks

(f) If a person is so unfortunate as to contract a venereal disease, self-preservation should cause him to immediately seek the advice of his family physician

I believe that the public should be particularly enlightened on the dangers of gonorrhea, that it should be fully aware that recent statistics conclusively show that the number of gynecologic operations increase each year necessitated by lesions due to the gonococcus The husband, either criminally or unconsciously, transmits the gonococcus to his wife, usually in the following manner In his bachelor days he contracted a gonorrhea, which was treated according to the usual methods, the gonorrhea disappears, but leaves in its place an insignificant gleet, a chronic discharge of such apparently little importance that the patient neglects to have it treated, supposing that it will cure itself He gets married, usually without any thought of the past and without consulting a physician as to the seriousness of this little morning drop After a variable length of time, and as soon as a congestion of the uterus predisposes the organ to microbic receptivity, the young wife presents all the well-known symptoms of a gonorrheal infection

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[1] Amer Med., Jan 13 1906

[2] New York and Phila Med. Jour., Feb. 10 1905

To a certain extent the public has surmised the dangers accruing from this disease, but not to the extent that it should In face of the terrible consequences to which gonorrhea may give rise, the mortal dangers to which the spouse is exposed, sterility following gonococcic complications, certain members of the profession have declared open war against gonorrheal patients culpable of contamination In Germany especially a law is under consideration which tends to protect women against venereal contagion from the husband or even the lover Professor Hegar, in Germany, Jullien, Cazalis and several other physicians in France have proposed an obligatory verification as to the genital innocuity of the future husband As a conclusion to this I would advise that young men be told that if they are unfortunate enough to contract gonorrhea or syphilis they should loyally consult a reputable physician before their marriage to ascertain whether or not they are fit subjects for matrimony It is high time that the profession put an end to public ignorance in these matters and thus to a great extent avoid many catastrophes and moral pain

There is a sad commentary on the practicability of the work of the temperance reformer in the fact that each succeeding generation of medical men is brought face to face with the disheartening truth that alcohol is still the "open door" through which stalks the foul specter, venereal disease Since the days of Noah alcohol has continued to be the most powerful weapon in the seducer's armamentarium In this he has an agent more deadly to virtue than the most powerful implement of warfare is to life itself, and with it he has it in his power to pave the way for suffering beyond human expression

It is not my purpose to descant on the horrors of intoxication, nor is it at all necessary for the purposes of my theme I do not need to follow the victims of the drug beyond that point where it robs the intellect of its inhibitory powers and deprives it of free agency Such a state of mind by no means of necessity implies drunkenness, indeed, it comes at a point well on the hither side of that condition, and the horror of it all lies in the very fact that brain activity is not actually annihilated, but only cruelly perverted

In this state the ordinary calm, self-restrained discriminating man may be transformed for the time being into a rutting animal and the virtue of a similarly endowed woman may drop from her like a mantle

In the presence of men of your training and experience of human frailty it is almost supererogation on my part to pursue this line of thought in greater detail Given two creatures of opposite sexes, created after the image and likeness of the Maker, reduce them by alcohol to the state of mind above described, and the inevitable results are familiar to you all

The stage settings that serve for the act in which the luetic virus may be imparted vary from the most sordid and squalid to the most luxurious and artistically perfect the human intellect is capable of inventing, and the actors in this most unspeakable of human tragedies, in like manner, represent each and every stratum of the body social

The foci of propagation of venereal disease and prostitution do not wholly reside in houses of ill-fame The reformer must look to the comic opera company, the private dining room, the furnished lodgings, the apartment house on the "easy virtue" style, the steamboat stateroom, the massage and manicure parlors, the automobile, the electric baths, the fortune-telling outfits, and lastly the avowed *maisons de joie* The American cities have two potent foci for the development of prostitution, of which continental cities can not boast, I refer to the downtown office building and the bachelor apartment houses so much in vogue at the present time

Prostitution, especially the clandestine form, is rampant in Boston, and in proportion to its population the Hub can compare favorably in this respect with any European city of its size with which I am familiar

Beside those causes of a general order which influence prostitution and criminality in general are others which belong more particularly to the former Leaving aside the culpability belonging to its authors, this crime is the consequence of other mistakes on the part of jurisprudence and public opinion A large part of the responsibility rests on public opinion, because it encourages the seducer by its indulgence, perhaps even by its admiration Public opinion also directs the education of women and the present system forces her especially toward the arts of seduction and coquetry, thus making her easier to seduce than seductive The seducer of the twentieth century generally does not understand the extent of his responsibility, he goes about the proceeding because he is fully aware that many others have done the same, and he is covered by public opinion until the day that the scandal breaks out Our up-to-date morals have taught him that to seduce a young girl, up to that time virtuous, and afterward to abandon her, in other words, of dishonoring her, and making her a candidate for prostitution, is practically nothing, and jurisprudence in our country hardly takes into consideration the moral assassin

Another important factor in the development of the prostitute is our modern education In large cities young girls of the people and working classes are, by their clothes, their manners and even mentally, in a condition far superior to the men of their own class From this very fact, they become easy conquests for men of the well-to-do and richer classes, and there would be fewer seduced girls and married clandestine prostitutes if the parents did not sanction their daughters' luxurious habits far above their social rank and fortune

Another potent cause forcing women to their fall is the insufficiency of salaries in large department stores and workshops The conduct of a young girl whose poverty prevents her from entertaining the hope of marriage, thus no longer becomes a moral question with her but one of interest, and she reasons to herself that it is just as well to get as much out of life during youth possible if nothing but poverty-stricken firmity are to follow the pleasant days of the springtime of life

On the other hand, the conception of marriage as the only possible mode of union has also disappeared from the minds of the mass of the population, marriage has ceased to be a sacrament and is looked on merely as a contract, which, in turn, under the influence of public opinion, law and jurisprudence in the matter of divorce, becomes every day still more fragile

To sum up, it would seem to me that in order to deal with the spread of syphilis and prostitution, we should take into consideration the control of existing morals and opinions, teach the youth of our country the evils accruing from venereal diseases and the erection of proper hospitals for those already afflicted and who may become dangerous to society from this fact

871 Beacon Street

Clinical Notes

THERMOVIBRASSAGE A NEW METHOD OF TREATMENT

PRELIMINARY REPORT

FREDERIC WADE HITCHINGS S B , M.D (Harv)
CLEVELAND, OHIO

Nearly a year ago it occurred to me that if it were possible to give a treatment in which the effect of either dry or moist heat of any desired intensity could be added to that of mechanical vibration the value of the latter might be greatly modified, and perhaps markedly increased Most of the available time since has been devoted to perfecting apparatus for attaining this end, and not only has this been successfully done, but enough clinical and other data have been accumulated to warrant a preliminary statement

APPARATUS DESCRIBED

In brief, what has been done has been to insert a resistance coil into the same space ordinarily occupied by a ball vibratode The case surrounding the coil is of metal, and screws on the vibrator shaft just as an ordinary vibratode screws on From a plug switch on the bale of the vibrator a short cable passes into the case to connect with the coil wires, and part of the current which runs the vibrator is shunted through the coil circuit at pleasure by turning a switch on the bale beyond the plug switch, but between the switch controlling the current supply for the vibrator motor and the latter As a result of this arrangement the current can not pass through the coil unless the vibrator is actually running, and then only when the heat switch is turned on This protects the coil from becoming overheated by the operator going away and leaving the current on too long, an accident which happened once under a different arrangement, with the result that the case became red-hot.

By turning on the heat switch for thirty seconds after the vibrator is running and then turning it off a temperature of about 108 F develops in the case in another thirty to forty seconds This is usually a suitable temperature with which to begin a treatment, and can be borne with comfort At the end of from three to five minutes the temperature may be raised by again turning on the heat switch for from ten to twenty seconds The amount of heat is under absolute control and experience has shown that the individual patient varies very much in his susceptibility so that it is best gradually to raise the temperature according to circumstances The application is best made directly to the skin or through a moist cloth, if moisture is desired Of course, the vibrator continues to vibrate, whether the heat is on or off

SUCCESS OF TREATMENT

The first case treated by thermovibrassage seems to show what has since been borne out by both clinical and experimental work, i e , its peculiar efficiency in some cases, and that the effect produced is different from that produced either by vibration or the application of heat alone

History—Patient, a woman, aged 48, had suffered for years from attacks of trifacial neuralgia which were unusually severe, and confined her to her bed for at least twenty four hours No particular exciting cause had ever been found after repeated examinations, although the attacks were most likely to come on when she was over tired Different forms of treatment had been tried with little or no result In the attack under discussion, she was seen nine hours after its onset.

Examination—The pain was of moderate severity and radiated over almost the entire left side of the face There was a tender point over the supraorbital foramen, and the back of the neck on the same side was slightly indurated.

Treatment—At first the following treatments were tried in the order given The application of steady heat from a "thermalite" bag, alcoholic solution of menthol, vibration without heat twice with an hour interval between each time (this only made the pain worse), and, finally, an acetanilid compound tablet (gr iii. ss acetanilid, etc.) From all these things there was absolutely no relief

Two hours after the tablet was given, dry thermovibrassage, as hot as could be borne with comfort, was given over the tender spot, painful areas, and neck for five minutes The pain stopped completely before the treatment was over, and the patient felt drowsy, and took a nap There was no return of the pain until another attack came on three weeks later

It may be argued that the pain stopped because the attack happened to end just at the time the thermovibrassage was applied, but this does not seem at all probable with such a prompt and decisive effect. after the thorough trial of the other things over a total interval of nine hours with no benefit Moreover, in later and more severe attacks than this the effect was just as striking when the treatment was given nearer the time of onset More cases of a similar nature have been treated, and generally with equally favorable results, but the number is too small as yet to draw definite conclusions as to the per cent of cases which may be expected to be benefited

Muscular affections seem to be particularly suited to this treatment, but the necessity of making accurate diagnoses is too apparent to need further mention Already it has proved of decided value in sprains and bruises, in reducing swelling and soreness, and relieving pain In a case in which a patient's thigh was severely bruised by being crushed by an automobile against the side of the garage, with resulting hematoma and exquisite tenderness, the flesh could hardly be touched at the beginning of the treatment, but before the end several pounds' pressure could be applied, and the results were most satisfactory The symptoms in one case of acute torticollis disappeared under one treatment, and in another chronic case there was marked initial benefit, but the late results have not been determined Probably they will not be as favorable In a case of flat feet, complicated by general contraction of the muscles of the calves, severe pain was caused by the patient having to climb long flights of stairs many times a day Plates were worn, but the pain had continued in spite of massage and was steadily increasing When treated the result was more satisfactory as far as the pain was concerned, as it almost all disappeared, and doubtless would have done so completely if the stair-climbing could have been given up

In a case of chronic rheumatoid arthritis affecting the patient's knees vibration without heat was tried as a check against thermovibrassage The stiffness was relieved somewhat, but the effect was very transitory and not very marked With the latter the stiffness, soreness and pain were more relieved than by any other treatment the patient had tried in many years, and the effect lasted much longer than with other treatments No hope of a cure could be held out, but the patient was most grateful for the relief afforded

A private patient who had had a spastic paraplegia since he was a child was treated for congestive headaches due to mental overwork An area three inches square on the back of the neck was treated for five minutes at a time on successive days The headaches disappeared in a very short time and did not return The interesting point about this case, however, was an entirely unlooked-for result, which was that the patient found that he could stand up much straighter and control his legs much better after each treatment At first the effect lasted about twelve hours Later it lasted longer, and at the present time one treatment a week suffices At one time he had been under the care of Dr S Weir Mitchell, who prescribed massage and electricity, and he had also been treated by other prominent men, but the benefit from thermovibrassage is greater and more lasting than from any other previous treatments It may be noted here that vibration without heat does not produce the same effect at all So far no opportunity has offered to see whether other similarly affected patients would be benefited in the same way

At present, through the courtesy of Dr Henry S Upson professor of neurology in the Medical Department of Western Reserve University, thermovibrassage is being given a thorough trial in the neurologic clinic of the Lakeside Hospital Dispensary From the outset it is as useless to expect the regeneration of destroyed neurocytes from its use as it is from any other form of treatment, but the indications are that it is going to prove to be at least as valuable as electricity in its different forms and massage in many cases, and in some of decidedly greater value

With the help of Dr J B Austin enough experiments have been done to show clearly that the effect is both constitutional and local, and, as above stated is different from that of either vibration without heat or *vice versa* That it is of far greater value than ordinary vibration is borne out by all the clinical and experimental evidence. Many more cases than have been cited have been recorded, but a description of the experimental work and fuller details will be withheld until still more data have been collected

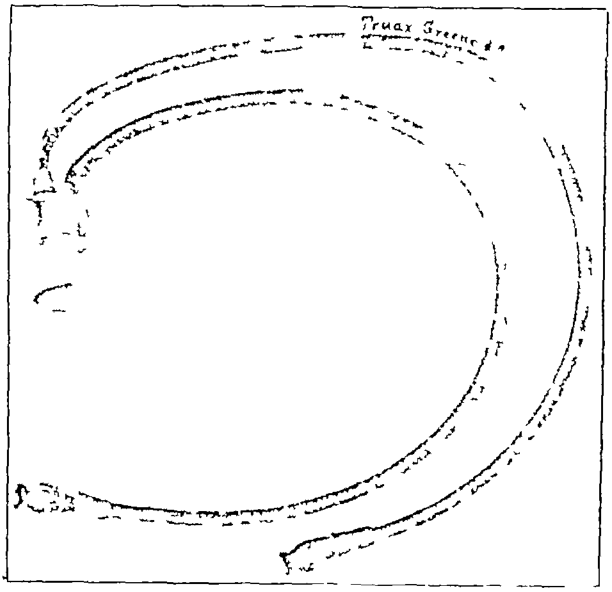
2658 Euclid Avenue.

A NEW STETHOSCOPE

EDMUND F WOODS, M.D

JANESVILLE, WIS

In presenting to the profession the stethoscope shown here I wish to recommend it for its simplicity, lightness and durability The bell is made from very hard metal, nickle-plated, and so thick that it shuts out all outside sounds It, therefore, conveys the heart and lung sounds better and more clearly than any other instrument I have been able to find, and especially gives the heart sounds without the humming sound so noticeable in other stethoscopes



TOTAL LUXATION OF THE SPINE

THOMAS F RAY, M D

DEESON, MISS

The abstract of Steinmann's article on "Total Luxation of the Spine," in The Journal, June 16, 1906 prompts the following report

Oct. 10, 1898, I was called to see a negro October 17 he had attempted to rearrange some bales of cotton loaded on a wagon In lifting them he placed his head under the bales and lifted with his head and hands In some way a bale fell on him and crushed him to the earth, whence he was picked up and attended by an irregular practitioner I found him suffering from a complete bilateral dislocation of the fifth cervical vertebra forward with complete paralysis of all of his limbs and bladder He could move neither hands nor feet and could not control his urine His bowels had not moved since the injury I immediately attempted reduction without anesthesia, which was accomplished very easily All the symptoms gradually improved At the expiration of two years he seemed normal in every way with the exception of a deficient grasp of the left hand I have not seen him for six years but his employer writes that he is well

New and Non-Official Remedies

The following articles have been tentatively accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in the proposed annual, "New and Non official Remedies" Their acceptance has been based largely on evidence supplied by the manufacturer or his agent, but to some extent on investigation made by or under the direction of the Council Criticisms and corrections are asked for to aid in the revision of the matter before final acceptance and publication in book form

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that so far as known it complies with the rules adopted by the Council.

W A PUCKNER, Secretary

(Continued from page 1308)

HEXAMETHYLENAMINE METHYLENCITRATE[1]

This substance, $C_6H_8O\ (CH_2)_6N_4 = C_{12}H_{20}O_7N_4$, is a compound of hexamethylenamine with anhydromethylencitric acid

It is a white crystalline powder melting with decomposition at 165 to 175° C (329° to 347 F) having an agreeable acidulous taste and acid reaction It is soluble in about 10 parts of water, but almost insoluble in alcohol and ether By dilute acids and more easily by alkalies it is decomposed with the liberation of formaldehyde On addition of 1 per cent. solution of phloroglucin to a solution of hexamethylenamine methylencitrate followed by sodium hydroxide the intense rose-red color characteristic of the liberated formaldehyde is developed.

It is incompatible with acids and alkalies

Actions and Uses—It is a urinary antiseptic and germicide claimed to be more prompt and energetic in its action than hexamethylenamine acting equally well whether the urine be alkaline or acid in reaction, rapidly clearing it up and allaying pain

It is recommended in cystitis, pyelitis, prostatic diseases and urethritis It is also recommended as an efficient urinary antiseptic in infectious diseases in which bacteria are present in the urine, as in typhoid fever It is regarded as a useful urinary antiseptic in the later stages and chronic forms of gonorrhea

It may be used as a prophylactic against infection in case of operations or instrumental manipulation of the genitourinary tract

Dosage—0 6 to 1 Gm (10 to 15 grains)

HOLOCAINE HYDROCHLORIDE

ETHENYL-PARADIETHOXY-DIPHENYL-AMIDINE HYDROCHLORIDE

Holocaine hydrochloride, $CH_3\ C(\ N\ C_6H_4\ OC_2H_5)(\ NH\ C_6H_4\ OC_2H_5)\ HCl = C_{18}H_{22}N_2O_2\ HCl$, is the hydrochloride of a basic condensation product of paraphenetidin and acetparaphenetidin (phenacetin)

It is prepared by the interaction of molecular proportions of paraphenetidin sulphate and acetphenetidin (phenacetin) in the presence of phosphorus oxychloride decomposing the resulting holocaine sulphate with sodium hydroxide crystallizing the base from alcohol, neutralizing it with hydrochloric acid, and crystallizing

It forms small colorless crystals neutral or faintly alkaline melting at 189 C. (372.2 F) odorless faintly bitter and producing transient numbness on the tongue. It is soluble in 50 parts of water and freely soluble in alcohol On boiling in glass vessels the aqueous solution becomes turbid owing to a separation of a small quantity of the free base by alkali derived from the glass.

It should form a clear colorless solution in water neutral or faintly alkaline yielding white precipitates on addition of silver nitrate or of ammonia. The base obtained by precipitation with ammonia and crystallized from alcohol forms colorless needles which melt at 121° C. (249 8 F) Incinerated on platinum it leaves no weighable residue.

It is incompatible with alkalies and their carbonates and the usual alkaloidal reagents Glass vessels should be avoided in preparing the solution porcelain being used instead.

Actions and Uses—It is a local anesthetic like cocaine, but having the advantage of quicker effect and an antiseptic action Five minims of a 1 per cent solution when instilled into the eye are usually sufficient to cause anesthesia in from 1 to 10 minutes It is more toxic than cocaine and without effect on the pupil or blood vessels It is not so useful as cocaine when the vasoconstrictor effect of the latter is desired It is said not to cause the scaliness of the cornea which sometimes results after the use of the older remedy

Dosage—It is applied in a 1 per cent aqueous solution prepared in porcelain vessels

Manufactured by Farbwerke, vorm Meister Lucius & Bruening Hoechst a M. (Victor Koechl & Co New York) German patents Nos. 79 868, 80 568

HYPNAL

ANTIPYRINE CHLORALHYDRATE MONOCHLORAL-ANTIPYRINE

Hypnal, $C_{11}H_{12}N_2O\ CCl_3CH(OH)_2 = C_{13}H_{15}N_2O_3Cl_3$, is antipyrine combined with one molecule of hydrated chloral

It is prepared by triturating molecular proportions of antipyrine and hydrated chloral together dissolving the resultant oily liquid in hot water and allowing the solution to cool.

It occurs in colorless octahedral crystals or a white crystalline powder melting at 67° C. (152 6 F) It is soluble in 10 to 11 parts of cold water easily soluble in hot water and in 3 5 parts of alcohol forming neutral solutions

The aqueous solution gives the usual reaction for antipyrine (a blood red color with ferric chloride) and for hydrated chloral (turbidity and separation of chloroform when warmed with caustic alkali) Ammoniacal silver nitrate is reduced with the formation of a silver mirror but the aqueous solution (1 10) acidified with nitric acid is not altered by silver nitrate nor precipitated by hydrogen sulphide. Hypnal dissolves in concentrated sulphuric acid without coloration and leaves no weighable residue when incinerated on platinum

It is incompatible with alkalies their carbonates and bicarbonates and with metallic salts

Actions and Uses—Hypnal is an analgesic and hypnotic resembling chloral in its action, but said to be less liable to produce injurious effects on the vasomotor center or the heart It may be used where chloral is indicated, as in mild forms of mental excitement, incipient delirium tremens, and in insomnia caused by pain

Dosage—1 to 2 Gm (15 to 30 grains), although supposed to be less toxic than chloral, larger doses up to 3 Gm (45 grains) should be used with caution It may be given dissolved in water (1 10) flavored with syrup of orange or aromatic elixir

Manufactured by Farbwerke, vorm Meister, Lucius & Bruening, Hoechst a. M (Victor Koechl & Co., New York)

ICHTHALBIN

ICHTHYOL ALBUMINATE

A compound of ichthyolsulphonic acid and albumin analogous to tannalbumin

It is prepared by precipitating a solution of ichthyol and albumin with diluted sulphuric acid and removing adhering odorous oil by heating the well washed and dried precipitate for 24 hours at 120 C. (248 F) or by washing with alcohol, benzene, petroleum benzin chloroform, etc.

It is an extremely fine grayish white powder odorless and practically tasteless It is insoluble in water, in the gastric juice or in acid liquids, but completely soluble in alkaline liquids

Actions and Uses—Ichthoform is said to be antiseptic and antiphlogistic It is reported to be efficacious in arresting intestinal decomposition and inflammation, whilst non-toxic

Dosage—For infants 0 13 to 0 3 Gm (2 to 5 grains), in gruel, older children, 0 6 to 1 Gm (10 to 15 grains), mixed with scraped chocolate, adults, 1 to 1 3 Gm (15 to 20 grains), in chocolate tablets

Manufactured by Knoll & Co Ludwigshafen a Rh and New York. English patent No 11 344 U S trademark No 31 114

ICHTHAMMON

The ammonium compound of a sulpho-acid obtained from a bituminous mineral by distillation with sulphuric acid and neutralization with ammonia

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[1] This is the chemical name for a preparation on the market under the names of helmitol and urotropin, new (which see)

Actions and Uses—It has the physical properties of ichthyol, a high sulphur content and, therefore, is claimed to have the pharmacologic and therapeutic properties of ammonium ichthyol sulphonate (see ichthyol)

Manufactured by I Reichelt, Breslau

ICHTHARGAN

SILVER SULPHICHTHYOLATE SILVER ICHTHYOLATE
ARGENTUM THIOHYDROCARBUROSULFONICUM
SOLUBILE

A compound of ichthyol and silver, claimed to contain 30 per cent of metallic silver and 15 per cent of sulphur in organic combination

It is prepared according to the patent specifications by neutralization of ichthyol sulphonic acid with silver oxide and extracting the water soluble silver ichthyol sulphonate

It is a brown amorphous, perfectly stable powder having a faint chocolate like odor It is freely soluble in water glycerin or diluted alcohol but insoluble in absolute alcohol ether or chloroform Its aqueous solution darkens with precipitation of metallic silver when exposed to the light, but is said to suffer no change in amber colored bottles

It is incompatible with the soluble chlorides Its solutions should not be exposed to the light

Actions and Uses—It is said to be bactericide, astringent and antiphlogistic It is reported to combine the bactericidal action of the silver salt with the penetrating and antiphlogistic action of ichthyol

It is recommended in gonorrhea in all its forms as a succedaneum for organic salts of silver It is claimed to be the strongest in silver content of all the various organic compounds of silver introduced in late years

Dosage—0 04 to 0 2 per cent solution in gonorrhea, 3 per cent solution in posterior urethritis, ½ to 3 per cent solution in trachoma

Manufactured by the Ichthyol Co, Hamburg (Merck & Co New York) German patent No 112,630

ICHTHERMOL

HYDRARGYRUM THIOHYDROCARBURO-SULFONICUM MERCURY ICHTHYOLATE

A compound of ichthyolsulphonic acid and mercury, containing 24 per cent of metallic mercury

It is a dark colored, odorless powder insoluble in water

Manufactured by the Ichthyol Co., Hamburg (Merck & Co, New York)

ICHTHOFORM

ICHTHYOL FORMALDEHYDE

A compound of ichthyol and formaldehyde

It is a dark brown, practically odorless, and tasteless powder It is permanent and insoluble in the usual solvents.

Actions and Uses—Ichthoform is said to be antiseptic and antiphlogistic It is reported to be efficacious in arresting intestinal decomposition and inflammation, whilst non-toxic

It is recommended internally in intestinal sepsis and externally in endometritis, in ozena, and in wounds, ulcers, etc

Dosage—Internally, 0 6 to 2 Gm (10 to 30 grains), in powders taken plain, or suspended in gruel or cacao, or as a "shake" mixture, externally as pure powder, as 30 to 50 per cent triturations, or as 10 to 25 per cent ointments

Manufactured by the Ichthyol Co Hamburg (Merck & Co, New York) German patent No 107 233

ICHTHYOL

AMMONIUM SULPHO-ICHTHYOLATE AMMONIUM ICHTHYOL SULPHONATE AMMONIUM-ICHTHYOL

Ichthyol consists largely of the ammonium salts of sulphonic acids derived from the tar of a bituminous shale which is found in the Tyrol and which contains the remains of many fossil fishes The exact composition and nature of ichthyol is still doubtful

It is prepared by dry distillation of the bituminous mineral sulphonating the crude volatile oil obtained with concentrated sulphuric acid removing the excess of sulphuric acid by repeated precipitation with strong brine and saturating the ichthyolsulphonic acid with strong ammonia

Ichthyol is a brown viscid liquid translucent in thin layers having a bituminous odor and taste It is soluble in water and in mixtures of equal volumes of alcohol and ether but insoluble in the last two liquids by themselves It is miscible with glycerin oils and fats. It contains about 10 per cent of sulphur in natural combination and a further 7 per cent introduced by the sulphonation

Ichthyol is precipitated from its aqueous solutions by acids, and the dark, resinous mass thus formed is soluble in ether and in pure water but not in dilute acids or in salt solutions The fixed alkalies develop the odor of ammonia and if the mass is then dried and carbonized, the residual mass gives off hydrogen sulphide on addition of hydrochloric acid When dried on a water bath it yields about 55 per cent of residue

It is incompatible with acid and saline solutions fixed alkalies their carbonates and iodides alkaloidal salts, mercuric chloride etc.

Actions and Uses—Ichthyol penetrates the unbroken skin and, it is claimed, acts as a vasoconstrictor on mucous surfaces It has an antiseptic action and is believed to act as an alterative in consequence of the sulphur which it contains

It is recommended internally in phthisis, skin diseases, gout, scrofula, nephritis, etc Externally it has been applied in erysipelas, burns, chilblains, carbuncles, rheumatism, ivy poisoning, etc, also in uterine and vaginal inflammation, gonorrhea, etc

Dosage—Internally, 0 2 to 2 Cc (3 to 30 minims) mostly in simple solution in water, or peppermint water, sometimes in the form of pills or capsules Externally, in vaginal, uterine or rectal suppositories, in 0 06 to 0 12 Cc (1 to 3 minims) bougies, or 1 to 3 per cent solution for gonorrheal treatment

Manufactured by the Ichthyol Co Hamburg (Merck & Co, New York) German patent No 35,216 U S trademark.

ICHTHYOLUM AUSTRIACUM

PETROSULFOL

A product obtained by the sulphonation of a mineral oil having a large natural sulphur content, neutralization with ammonia, and deodorization and purification by dialysis

Actions and Uses—These are claimed to be identical with those attributed to ichthyol

Manufactured by G Hell & Co, Tropau

IODIPIN

IODIZED SESAME OIL, MERCK, TEN PER CENT

Iodipin is an iodine addition product of sesame oil containing 10 per cent iodine, in organic combination

It is prepared by the action of iodine chloride on sesame oil in sufficient quantity theoretically calculated to produce the required iodization

It is a yellow oily liquid, having a purely oleaginous taste. It is insoluble in water

If to 1 Cc. of iodipin in 10 Cc. of chloroform a few drops of phenolphthalein test solution are added the addition of one drop of half normal potassium hydroxide V S should produce a red color (limit of acidity)

Estimation of Iodine 3 Gm of iodipin are saponified by heating with 5 Gm of potassium hydroxide and 25 Cc. of alcohol The solution is evaporated to dryness on the water bath and the residue carefully incinerated The residue is extracted with water and the washings filtered into a Kopf distilling apparatus. Then 10 Cc. of hydrochloric acid and 10 Cc. of ferric chloride solution are added and the liberated iodine distilled with the usual precautions into a solution of potassium iodide Finally the iodine is determined by titration with tenth normal sodium thiosulphate solution V S and the per cent of iodine calculated

Actions and Uses—Iodipin acts in the system similar to the iodides, being broken up in a manner analogous to that described under bromipin, which see Its action is more lasting and with less tendency to iodism

Manufactured by E. Merck Darmstadt. (E Merck & Co, New York) German patent No 96 495

(To be continued

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SATURDAY, OCTOBER 27, 1906

THE EFFECT OF STRENUOUS EXERCISE ON THE HEART AND KIDNEYS

The active campaign against football which was in progress last season, and which had as its result a modification of the rules, was set in motion by the deplorably great number of gross physical injuries incident to the game The question as to what effects of a less tangible character violent exercise of this character produces is one which, though it has occasionally been considered, has hardly received the attention it deserves It has been believed, in a general way, of course, that many well-known athletes die young, but scientific observations on the cardiovascular and renal changes in athletes, extending over years, are sadly lacking

The question is brought up again by the recent observations of Baldes, Heichelheim and Metzger[1] on the contestants in a twenty-mile walk The facts which were brought out were not altogether new, though some data were added to the older ones of Leube, MacFarlane and others The lesions produced by the excessive exercise were, in brief, the appearance in the urine in almost all cases of albumin, often accompanied by casts and at times by blood, a decided decrease in the arterial tension, associated with some enlargement of the heart, and decrease or absence of the tendon reflexes In two or three instances the observers were able to see contestants some days after the walk, and in these individuals it was noted that the heart and kidneys had returned to normal These results, so far as the urinary changes are concerned, correspond to those of Leube, who examined soldiers after long marches, and to those of MacFarlane, who examined football players before and after games The new facts brought out by Baldes and his associates indicate a decided effect on the heart, and incidentally on the blood pressure, and also some effect on the nervous system, as shown by the changes in the deep reflexes

The weak point in these observations is, as above stated, that they do not extend over a sufficient period of time Do such changes when brought about at frequent intervals, as they must be in football players, for example tend to leave behind them permanent structural changes in the organs most involved? So long as we are ignorant of the actual changes which occur it will be hard to answer this question Is the heart lesion an acute dilatation? As eminent an authority as Schott believes that it is, though this view is opposed by good authority The character of the kidney lesion which produces the albuminuria and cylindruria has led to much discussion Leube regards the albuminuria as physiologic, but it must be confessed that clinicians are yearly becoming more and more skeptical regarding albuminuria so described The urinary picture is that usually associated with an acute nephritis The albuminuria can hardly be associated with changes in the blood pressure, as this is lowered, and, furthermore, the volume of blood is probably lessened by the profuse sweating It may be that the excessive muscle work produces toxins which affect the kidneys At any rate this has been suggested

The whole matter is one which is capable of study and which is important enough to be studied In colleges, especially, the physicians who are in charge of the physical side of the students' development should be able in a few years to solve the questions here brought up

CONTAGIOUSNESS OF LATE SYPHILIS

There has always been a feeling of so much repulsion with regard to syphilitic lesions of any stage that this of itself has been sufficient to make people take precautions against possible inoculation There has been a definite persuasion in the minds of most physicians that the later lesions of syphilis that is, those occurring more than two years after the initial lesion, are not capable of conveying the disease This has been considered particularly true with regard to the gummatous lesions which occur after the disease has run a course of several years It is not always easy to distinguish absolutely between secondary and tertiary lesions, but gummata have always been considered as belonging to the third stage, and as being essentially non-contagious In recent years some doubts of this have been expressed, and now it would seem that a sufficient number of cases have been collected to prove that there is enough danger of contagion to make the taking of proper precautions after contact with such sores a matter for serious consideration

It is true that exposure to tertiary lesions has not been followed in a great many cases by infection An explanation of this as was pointed out by Dr Charles Mallory Williams[1] in an article on the "Contagiousness of Gumma," it may be found in the facts that tertiary lesions are much rarer than secondary, constituting less than 5 per cent of all cases of syphilis in large clinics, that tertiary lesions are often single, while secondary lesions are usually multiple, thus adding to the danger of contagion, and finally, that tertiary lesions occur on portions of the body as a rule from which infection does not readily take place Only slightly more than 7 per cent of all syphilitic patients in Neumann's clinic had tertiary lesions on the genital organs All these conditions lower the possibility of infection to a considerable degree and have undoubtedly been of great influence in producing the impression that tertiary lesions are never contagious

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[1] Münch med Wochschr., 1906 vol liii p 1865

[1] Medical Record July 14 1906 abstracted in THE JOURNAL A M A July 28 1906 page 305

There is scarcely an authority in venereal diseases, however who has not seen one or more cases in which the only possibility of the explanation of the occurrence of syphilis was contagion from tertiary lesions Among those who have reported such cases are Fournier, Jullien, Bumstead, Brandis, Neisser, Finger, Lassar, Ehlers, Brouardel, Gron and Bovero Fournier and Lassar have reported more than one case in which they were satisfied that there had been a conveyance of syphilis from a tertiary lesion This is quite enough to require that we should be conservative at least with regard to the contagiousness of such lesions It is true that, as a rule, attempts to inoculate syphilis into monkeys by means of the products of tertiary lesions failed in the hands of the French observers, and especially of Metchnikoff, though inoculations from secondary lesions were very frequently successful, but the German observers Finger and Neisser report several positive inoculations with tertiary material so that both of them have been ready to concede that gummata are caused not alone by the toxins of syphilis, as they used to think, but are also probably due to the action of the causative micro-organism of syphilis

As might be expected, the broken-down material of a gumma probably does not contain actively infectious material The micro-organism of syphilis seems to be very delicate in this matter and continues to exist only in thoroughly vital tissues It is well-known that inoculations of syphilis from dead bodies, either in the course of autopsy or later in the dissecting room, have never been reported

As some of the autopsies on syphilitic subjects have been undertaken within a few hours after death, and occasional accidental injuries have been produced during such autopsies, yet without positive results, it would seem clear that the microbe of syphilis dies almost simultaneously with its host It would not be surprising then that it should not be found alive and vigorous in the devitalized portions that make up so much of the gummatous lesion At the most it would be only at the very edge of the gumma where this shaded off into healthy tissues that the microbe might continue to live This may account for the fact that so far the spirochete which is coming to be rather generally accepted as the micro organism of syphilis has not been found in gummatous tissues It may also account for the infrequency of infection from such tissues

It is clear however, from the present state of our knowledge in the matter that there has probably been over confidence in the supposed non-virulence of tertiary lesions, and that hereafter greater care will have to be exercised by the physician himself, for some of the reported cases of contagions were in physicians, and that it will be necessary to insist that patients should take greater care to avoid the possibility of infecting others while in this stage of syphilis

PALLIATIVE SURGICAL OPERATIONS IN CHOKED DISC

Three recent articles from most competent men (Spiller and Frazier,[1] Starr[2] and Horsley[3]) emphasize the importance of surgical procedures—palliative and radical—in the treatment of cases of intracranial disease in which the symptoms are those of general brain pressure One point especially brought out in these papers is the very great importance of early surgical interference when, as often exists in these cases, the optic nerve is involved In his consideration of palliative surgical procedures, Horsley says "In no case of optic neuritis (not, of course, of toxemic or anemic origin) should the process be allowed to continue after it has once been diagnosed, and if blindness results therefrom the responsibility is very heavy on any one who fails to advise such a simple procedure as opening the dura mater" Starr does not insist so emphatically on palliative operations, but he quotes encouraging cases Spiller says that palliative operations should be performed early in every case in which symptoms of brain tumor are pronounced and before optic neuritis has advanced far, especially when syphilis is improbable or when antisyphilitic treatment has been employed

Of course, palliative operations are useless, so far as the optic nerve and its function are concerned, if they are delayed until optic neuritis has become advanced In deciding on this point Horsley says "Yellowish-white stippling, patches of exudation or opal white atrophic changes, especially when associated with macular figures, indicate that the secondary changes in the disc are likely to be permanent and therefore, in proportion to their development so the vision will be impaired, whereas when the loss of vision has been dependent simply on the swelling of the disc then not only is the sight saved, but largely improved"

In these papers striking cases are quoted, showing the good effects of palliative surgical procedures on the optic nerve and vision, and also in the relief or lessening of all the pressure symptoms, including the headaches Cases are also quoted which show the result of a lack of proper surgical interference Horsley quotes the case of a woman who developed symptoms of brain tumor with acute optic neuritis and who was told that nothing could be done surgically Subsequently and after some treatment with the iodids the neuritis subsided into complete atrophy and blindness, while the cerebral lesion gradually retrogressed Unfortunately it is given to every ophthalmologist to see such cases

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[1] Spiller and Frazier The Journal A M A Sept 8 1[illegible] 22

[2] Starr M Allen The Journal [illegible] Sept [illegible] p 92[illegible]

[3] Horsley Sir Victor Brit Med [illegible] 4

Another very unfortunate class of cases exists In some of the cases with brain pressure symptoms, the condition does not bring about death for several years, while blindness may occur fairly early in the process of the disease and thereby the final months of life of these patients be made more miserable

Horsley says, and it is true, that the gravity of the responsibility in these cases does not seem to be generally recognized The three papers mentioned here will attract wide attention and will force on many men a realization of the proper course to pursue in dealing with the optic neuritis in these cases

PRESIDENT ELIOT ON THE FUTURE OF MEDICINE

The longer formal addresses at the recent dedication of the Harvard Medical School are noteworthy productions President Eliot discusses in a most intelligent and sympathetic manner "The Future of Medicine," and Professor Welch, with his customary broad grasp and clearness dwells on "The Unity of the Medical Sciences"[1]

President Eliot lays stress on the fact that in the past the physician devoted himself very largely to the treatment of diseases already developed and injuries already incurred There will always be need for services of this kind and for medical schools to fit men for such service But in the future more than in the past the medical profession must concern itself with the prevention of disease Hence the study of the causes of disease and of the means of prevention must be continued with increasing energy Not only must liberal provision be made for scientific investigators to make discoveries and create new knowledge, but medical men must see to it that intelligent practical application is made of the new knowledge for the protection of the health of human beings in all sorts of climates and environments It is not enough that the epochal work of Reed and his colleagues proved how yellow fever is communicated—for years physicians must teach the people of the South how they now can protect themselves successfully against yellow fever

This brings us to the point in the address on which we wish to place particular emphasis, namely, the new function of the medical profession of teaching the people in general directly how diseases are caused and how prevented In this work a beginning has been made, as witness the campaign against tuberculosis in particular This function must be extended, and President Eliot calls on the medical schools to provide popular expositions concerning water supplies, foods, drinks, drugs the parasitic causes of disease and modes of communication of all communicable diseases Museums and popular lectures are needed "Selected physicians should become popular teachers, as well as private practitioners" In this work should be enrolled the intelligent and unselfish country practitioner as well as the college professor and the health officer

President Eliot's concluding remarks in regard to the broad character of the education necessary to fit men for the practice of modern medicine and for successful medical investigators show, like the other parts of his address, a truly remarkable grasp of the needs of medicine and he merits well the eulogy pronounced on his work in behalf of medical education by Professor Welch "To have recognized fully from the beginning of his administration the importance of the vitalizing union of the medical school with the university, to have striven patiently with full grasp of the problems and with intelligent sympathy with the needs of medicine for the uplifting of the standards of medical education, and, with the aid of his medical colleagues, to have planted these standards where they now are in the Harvard Medical School is not the least of the many enduring services which President Eliot has rendered to American education"

A COUNTY BACTERIOLOGIST

A noteworthy appointment has recently been made by the authorities of Ontario County, New York, namely, that of a county bacteriologist at a salary of $1,500 a year The *Medical Times*,[1] from which we learn of this innovation, points out that this is probably the first appointment of its kind in the country Ontario County has a population of 50,000, the largest city being Geneva, with 11,000 The rest of the population is largely agricultural Special legislation was necessary in order to make the appropriation, the appointment was nonpolitical, and the services of the bacteriologist are to be free to all the physicians of the county, under the supervision of the health officers Ontario County is worthy of commendatory congratulations for this wise and beneficial action, which other counties will do well in studying with a view to doing likewise Only by some such arrangement as this will it be possible to secure for all the people in rural communities and smaller cities the immediate practical benefits of bacteriology and pathology in the diagnosis and treatment of disease, and in questions of public health and sanitation By the prompt discovery of an outbreak of typhoid fever or of diphtheria and the application of modern preventive measures the county bacteriologist may prevent financial loss to the community in comparison with which the outlay for his salary and laboratory is quite insignificant to say nothing of the far more important result in the conservation of health and life It seems quite natural that with time the office of county bacteriologist will expand naturally so as to include also the kinds of work that would fall to a county pathologist The two kinds of work are so closely related that it is difficult to imagine their practical separation at this time To the county bacteriologist or pathologist whatever name he be called (pathologist is perhaps more comprehensive), would be referred not only bacteriologic work for diagnostic and other purposes, but also such work in microscopic and chemical diagnosis, e g, of suspicious growths, pathologic exudates, urine, blood, etc, as many physicians find they can not themselves do satisfactorily The county pathologist could be called on also to perform autopsies in medicolegal as well as in other cases There is then a large field of usefulness for the county pathologist and the county laboratory, without limitation in any manner of the work of the ordinary practitioner, which, however, this new office would render more effective and more accurate The general educational influence and the stimulus to better work on the part of physicians that would come from the county laboratory should not be overlooked We hope that Ontario County may find many imitators and that county medical societies will discuss this matter with a view to the necessary education of public sentiment

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[1] Both addresses appear in full in *Science* October 12 and THE JOURNAL contained abstracts in its full report of the dedication October 6 p 1117

[1] October 1906

THE CHICAGO MEAT INSPECTION REGULATIONS

During the active agitation about the pure food laws and the exposures at the Chicago stockyards, the Chicago Medical Society appointed a committee to investigate the regulations for meat inspection at the Chicago Union Stockyards That committee has now made its report, which is printed in the *Bulletin of the Chicago Medical Society,* October 15 The report states that the regulations are more rigid in general than those of other countries and include all, or nearly all, the precautions that the committee considers essential for the protection of the public, with possibly a suggestion that they might be a little more strict as regards animals suffering from hog cholera or swine plague In some particulars, as in regard to actinomycotic abscesses, they consider them unnecessarily rigid, and the same is true as regards the condemnation of hogs suffering from localized tuberculosis, the carcasses of which, they think, might safely be used for lard by rendering at high temperature It would certainly appear from the general tenor of their report that the Chicago regulations are certainly efficient for the protection of the public against diseased meats The committee publishes as an appendix letters from such authorities as Drs Welch of Johns Hopkins Theobald Smith of Harvard, E O Jordan of the University of Illinois J G Rutherford, veterinary director-general of Canada, and others, indorsing the opinions expressed in the report In Dr Welch's letter emphasis is laid on the importance of special training and competence of meat inspectors, and the committee gives its endorsement of the recommendation and insists on the necessity of more ample educational provisions and better remuneration for this important work With our present system of municipal appointments, perfect fitness is not assured even in the better remunerated positions With the government inspection, however, under the new law, it may be assumed that thoroughly adequate methods will be followed and that American meats will be exceptionally safeguarded as compared with those from other sources throughout the world

THE ALLEGED INCREASE OF INSANITY

A London physician, Dr Forbes Winslow, is the alleged authority for the statement that the world is going mad and that if the present rate of increase of insanity continues, as it seems likely to, the sane individual will soon be the exception and not the rule He is said to support his opinion by statistics, but statistics are sometimes queer things It will be remembered that Mark Twain once figured out that at the rate of shortening that the Mississippi was undergoing, according to statistics, the cities of New Orleans and St Louis were bound to be united, and it may be that insanity statistics can be used in the same way We should be rather inclined to think that the world is growing saner, that its standards of sanity, as well as of morals and other things, are becoming more exacting, and that the great apparent increase of mental disorders can be accounted for, at least in part, by this fact We recognize and segregate the insane more than ever before and have shifted a not inconsiderable number of those who were formerly regarded as simply criminals, and punished as such into this category It is the more general recognition of the exceptional character of insanity that helps to make its apparent increase the more noticeable That there is an increase in the number of the insane can not be denied, the crowding into cities, with the consequent greater stress of life and other abnormal social conditions, are probably largely responsible, and in this country we have, in addition, the disturbing factor of immigration which is responsible for a large proportion of the population of our asylums We may be overdoing the matter in the present phases of our social progress, but we may feel reasonably sure that an acceptable equilibrium will be reached before things get to the worst Even now there are communities in which the increase has apparently come to a standstill Insanity is a problem of the day, but it is not so much of one as the alarmists would have us believe

CHEYNE STOKES RESPIRATION

The peculiar type of periodic respiration first accurately described by the great Irish clinicians has long been known to the profession as a not infrequent accompaniment of certain forms of uncompensated heart disease and of cerebral compression The sign, *per se* so far has not been of any great diagnostic significance, though from the standpoint of prognosis it has usually been regarded as a distinctly unfavorable portent, often unjustly It has been universally held that the mechanism of the sign, though obscure, was doubtless the same in all cases, no matter what the character of the primary disease The recent work of Eyster[1] is of interest in this connection as it shows that the form of Cheyne Stokes breathing which accompanies cerebral compression differs from that which occurs in connection with cardiac and renal diseases In Cheyne-Stokes respiration due to cerebral compression the period of respiratory activity is associated with a rise in blood pressure, while in that due to the other conditions th[illegible] rise [illegible] blood pressure corresponds to the period [illegible] tion may have more than theoretical importance, for it can be imagined that in semi-conscious patients with this form of breathing the relation between the blood pressure and the phase of respiration may incline the clinician to regard the condition as cerebral or otherwise as the case may be

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[1] Bull Johns Hopkins Hosp., [illegible] Experimental Medicine, 1906, vol [illegible]

Medical News

COLORADO

New Hospitals—The Santa Fe system has decided to erect a new hospital at La Junta, to cost $30,000——The La Junta Sanitarium Association contemplates the erection of a new hospital to accommodate 25 patients and to cost about $11,000

Medical Women Give Luncheon.—The Women's Medical Society, Denver, gave a luncheon to the women members of the Colorado State Medical Society, October 12 Covers were laid for 25, and Dr Kate Lindsey, formerly a medical missionary in South Africa, gave an address

Health of Colorado Springs—Dr P Oliver Hanford, health commissioner of Colorado Springs, reports a death rate for August of 15 37 per annum Only one case of scarlet fever was reported during August, and less typhoid fever than obtained in the corresponding month of last year

ILLINOIS

Hospital Burns—The Isolation Hospital, Granite City, was burned October 16, with a loss of $1,500

Sanitarium Incorporated—Dr Broughton's sanitarium at Rockford has been incorporated, with a capital of $40,000, by Dr Russell Broughton, J T Robertson and R K. Welch

Smallpox at Galesburg—At present there are five cases of smallpox at Galesburg, with three foci of infection The special need of the city is an isolation hospital, which will probably be built in a short time

To Establish Psychopathic Institute—A most important conference of state officials and others interested in public philanthropy was held under the auspices of the State Board of Public Charities at Springfield, Oct 18 and 19, 1906 The result of its deliberations promises a marked advance in the method of administering the public charitable institutions of the state Following the recommendations of the board, the following general plan for improving the efficiency of institutions for the care of the insane was discussed and the more important recommendations approved

1 State care of all insane epileptics and feeble-minded now in county almshouses and of dependent consumptives calling for the establishment of a state village for epileptics and a state sanatorium for consumptives.

The superiority of state care is urged since some counties can provide only the most primitive arrangements, while under state supervision every patient could have the advantage of modern equipment and expert care Attention was called to the fact that the presence of epileptics among insane patients is mutually detrimental, and segregation of consumptives among the insane and in prisons was recommended

2. Uniform local administration by a medical general superintendent in charge of each hospital with senior physicians paid internes, superintendents of nurses and sufficient nursing and attendant staff taught in a compulsory high grade training school and a dietetist on the medical side and a stewart or business manager, under the medical general superintendent on the business side
3 Hydrotherapeutic treatment for acute hopeful cases of insanity
4 More ample hospital provision for physically sick insane
5 Industrial reëducation for chronic types of insanity
6 More amusement and recreation for patients
7 The abolition of mechanical restraint and soporifics as far as possible
8 Pay patients
9 Uniform medical and other records
10 More thorough classification of patients

It is suggested that the senior physicians should be competent to take charge of special departments and that one at least should be a woman and one a surgeon with special experience in gynecology The internes should include a dentist with proper mechanical skill and equipment The training school for attendants should have as one of its principal functions the elimination of unfit employés and the abolition of improper methods The dietetist should have charge of the preparation of food, thus avoiding undue waste in this direction as well as in the purchase of food

11 Creation of a state psychopathic institute

This is to be a teaching institution and to be attached to one of the state hospitals with ample clinical and laboratory facilities It is to be presided over by an expert in psychic physiology and pathology, who will be able to give instruction and inspiration to the physicians in charge of the various hospitals and to advise and assist them in their scientific work Each hospital should be provided with a laboratory and better facilities for autopsies should be afforded But one such institution has been established in this country while there are 22 in Germany

12 An additional institution for the feeble-minded, including feeble-minded women of the child bearing age. The feeble-minded should be classified into improvable and custodial cases the present asylum for feeble-minded children was established for the improvable class but has been forced to take custodial cases
18 Consideration of physical changes to provide adequate ventilation and to put all buildings and equipment into satisfactory shape Survey of the various asylums shows that with one exception they fall considerably short of furnishing the amount of air *space desirable, the average shortage being 191 cubic feet per patient.*
14 It is proposed to change the name of the Asylum for Incurable Insane to the General Hospital for the Insane
15 Consideration of systems of charity administration for state institutions
16 The establishment of uniform grades of service, with maximum and minimum salary limits in each grade of uniform general rules with special rules issued by the superintendent to cover local needs, and of a uniform nomenclature of positions of employment

Dr George Zeller, superintendent of the Bartonville Insane Asylum, objected to the use of mechanical and medicinal restraint of insane patients, and advocated the repeal of the Illinois statute which legalizes mechanical restraint The conference passed a resolution recommending the establishment of a psychopathic institute, and it is stated that such an institute will be established either at Elgin or Kankakee The necessary funds will be taken from the general appropriation until a special appropriation can be secured for this purpose Committees were appointed as follows

State Care Including New Institutions Miss Lathrop Dr Webster, Dr E Evans, Dr Churchill Mrs. Bourland
Medical Administration and Uniform Records Internes Dr McAnnally Dr Podstata, Dr Wilhite, Dr Davis
Hydrotherapy and Industrial Reeducation and Recreation Dr Podstata Dr McAnnally, Dr Carriel Dr Sanger
State Psychopathic Institute Dr Greene Dr Podstata Dr W E Taylor
Improvement of Buildings and Grounds and Equipment Dr Emil G Hirsch Dr Zimmermann Dr W E Taylor
Problem of the Feeble Minded Mrs Bourland, Dr C B Taylor
System of Charity Administration Dr Hirsch Miss Lathrop Dr McAnnally Mrs Bourland.
Uniform Grades Rules Salaries and Nomenclature Mr Moulton Dr Athon Dr Podstata Dr W E Taylor
Local Business Administration Dr Hirsch Dr Greene Dr W E Taylor
Special Committee on Joliet Prison Dr Hirsch Dr Webster Mr Zimmermann

Chicago

Donations to Charities—At the quarterly meeting of the Schwabenverein donations amounting to $1,150 were made to the hospitals of Chicago——By the will of the late Adolph Loeb $500 was bequeathed to the Michael Reese Hospital and $250 to the Alexian Brothers' Hospital

Deaths of Three Quarters.—During the nine months ended September 30, 21 051 deaths were reported, an increase of 910 as compared with last year, and an increase of 1 4 per cent in the annual death rate Pneumonia caused 3,008 deaths, consumption, 2,444, Bright's disease 1,502, heart diseases, 1,522, violence, 1,322, and cancer, 1,002

Personal.—Dr Edmund J Doering has returned from Europe——Dr J S Clark has finished his services as interne at the Illinois Charitable Eye and Ear Infirmary and will practice in Freeport——While making a hurry call in South Chicago, October 18 the ambulance was overturned and Dr Sidney McLeod, the ambulance physician, was severely cut and bruised

Deaths of the Week.—During the week ended October 20, 539 deaths were reported from all causes, equivalent to an annual mortality rate of 13 72 per 1,000 The deaths numbered 11 more than for the preceding week and 73 more than for the corresponding week of 1905 Heart diseases caused 59 deaths, acute intestinal diseases 54, consumption, 52, pneumonia, 47 nephritis 45 violence (including suicide), 40 There was an increase of 4 deaths from diphtheria as compared with the preceding week and three times as many deaths from scarlet fever

Warning Concerning San Francisco Refugee—The Journal is asked to warn the profession against a man who is said to represent himself as Dr L Lloyd Shaw He tells a hard luck story of being burnt out in San Francisco and asks a little financial aid to send his wife to some neighboring town where her friends live—or for other equally legitimate purposes He claims to have been employed on newspapers for some years and sometimes represents that he has just obtained a job on one of the Chicago daily papers He seems undisturbed when informed that his story is exactly like that which is often heard from dead beats He dresses well, is about 5 feet 9 inches in height, weighs about 150 pounds, is smooth shaven, has dark hair streaked with gray, and an eye that rarely looks one in the face He says that he graduated from Rush Medical College in the year 1886 That name is found in the list of that class, but without any address One of the members of that class states that there was such a man in the class who was doing newspaper work at that time

INDIANA.

Donation to Hospital.—St John's Hospital, Anderson, has received $10,000 bequeathed by the will of the late John Hickey

Medical Library—Arrangements have been made by the Vigo County Medical Society to use a room in the basement of the new library building, Terre Haute, where its library of more than a thousand volumes will soon be installed

Medical College Opens—The formal opening of the Indiana Medical College, Medical Department of Purdue University, took place October 4, before a mass meeting of the entire student corps at Indianapolis Dr Henry Jameson, dean of the medical faculty, delivered the address and introduced the president of the university, Dr E W Stone, who also addressed the meeting

Physicians Ill and Injured.—Dr Lowery H Bear, Vevay, went to Cincinnati for an operation for appendicitis, October 7——Dr Franklin W Cregor, Carthage, was thrown from his buggy in a runaway accident October 5, and sustained severe cuts, bruises and lacerations——Drs Charles Houghland and Barton, Milroy, and Dr Albert J Shauck, Arlington, were thrown from an automobile going at a high rate of speed October 1 but, fortunately, were only slightly injured

Communicable Diseases—Smallpox has appeared in Richmond and all the children in the school which the affected child attended have been ordered to be vaccinated.——Owing to the prevalence of scarlet fever the public school of West fork was ordered closed October 5 by the health authorities The disease thus far is mild in form——A district school in Clay Township has been closed on account of an epidemic of scarlet fever Thus far 15 cases have been reported in the school.

Personal.—Dr Joseph F Somes, Vincennes, has been appointed surgeon for the Vandalia Lines, vice Dr William H Davenport, resigned——Dr Reuben H Leavitt has assumed charge of the female medical department, Dr Alaric T Payne of the male medical department and Dr Leon J Willien of the gynecologic department of St Anthony's Hospital, Terre Haute——Dr Edward T Griffith, Muncie, has returned from Alaska——Dr G E Fulton, Bluffton, returned from Europe, October 8

September Diseases and Death—Cerebrospinal meningitis was extraordinarily prevalent in September, 50 deaths being reported There were nine fewer typhoid deaths than in September, 1905, but more cases were reported The disease exists in every county of the state, usually in mild form Rheumatism came next in order of prevalence, and then followed tonsillitis, diarrhea, typhoid fever, cholera morbus cholera infantum, bronchitis and dysentery Pneumonia was reported thirteenth in order of prevalence and influenza was fifteenth Five cases of smallpox were reported in nine counties, with 2 deaths Pneumonia caused 93 deaths, or 45 less than for the corresponding month of 1905, consumption caused 291 deaths, cancer, 95 violence 196, diarrheal diseases 426, and diphtheria, 31 The board has issued a circular to all counties, urging that antitoxin be furnished free to people unable to pay for it, and sounds a strenuous note of warning urging the early use of antitoxin as a curative and prophylactic measure in diphtheria

KANSAS

Donation to Hospital—Mrs M J O'Mara, Tonopah Nev has sent to Dr George Emerson Winfield, a donation of $1 000 for St Mary's Hospital

Sanitarium Opens—The Independence Hospital and Sanitarium, under the charge of Dr Frank W Shelton, opened for the reception of patients, October 1

Personal—Dr Andrew L Skoog, assistant superintendent of the Parsons State Hospital Asylum, has resigned to accept a similar position in Colorado He will be succeeded at Parsons by Dr Hubbard

Against Unlicensed Physicians—The Franklin County Medical Society is making a determined fight against unlicensed practitioners One "cancer doctor," it is reported, has been found guilty and been fined $50, and it is announced that other arrests will follow

Disease Prevalence—During August the State Board of Health reports 209 cases of typhoid fever, with 32 deaths, 71 cases of tuberculosis, with 31 deaths, 47 cases of diphtheria with 7 deaths, 32 cases of scarlet fever, with 2 deaths, and 29 cases of smallpox and 22 cases of measles, with no deaths With the exception of measles, August, 1906, shows a very material falling off in contagious diseases

Communicable Diseases.—The physicians of Iola state that the epidemic of typhoid fever has begun to abate——Diphtheria is reported to have broken out in Montana Township Labette County There are 17 cases of diphtheria among the school children and two of the ward schools have been closed on this account——Diphtheria is reported to be gaining a strong foothold in Leavenworth——Two of the public schools of Emporia have been closed on account of the prevalence of diphtheria——The city schools of Lawrence have been closed as a precautionary measure, on account of an epidemic of diphtheria——The Union Heights public school in Burns was closed September 28 on account of the prevalence of diphtheria During September, 28 cases of diphtheria were reported in Topeka, one less than for the same period of 1905

MARYLAND

Baltimore.

Lectures on Psychology—Dr James N Baldwin, of Johns Hopkins University, Baltimore, on October 20 began a course of lectures on "Educational Psychology," before the teachers of the Baltimore schools

Personal—Dr John M Bergland has returned from a trip to Indian Territory——Dr Thomas J O'Donnell was badly bruised by being thrown from his carriage in a runaway accident, October 13——Dr William H Battsell has returned from Europe after an absence there of two and a half years——Dr Lewellys F Barker was elected president of the Johns Hopkins Medical Society, October 15, and Dr Rufus I Cole, secretary——Dr Charles W McElfresh was elected president of the University of Maryland Hospital Medical Society, October 6

MASSACHUSETTS

Diphtheria—In the Avon Home for Children, Cambridge, 22 out of 30 children have been attacked by diphtheria In eight of the cases the patients were so ill that they were removed to the city contagious hospital

Janet in Boston.—Prof Pierre Janet of Paris on October 15, gave the first address, of a course of 15 lectures at the Harvard Medical School, on "Classical Symptoms of Hysteria" Three lectures are to be given each week, and are open to all medical students, practitioners, advanced students and teachers of psychology

Milk Inspection—The milk inspector of Boston reports that his department has examined 20 653 specimens during the last year, and that of 5 559 specimens tested for bacteria, more than 10 per cent showed pus, or streptococci, or both The number of suits brought against the milk department is not quite so large as last year

Communicable Diseases—One of the rooms in the Coverly School, Malden, has been closed by the Board of Health on account of the prevalence of diphtheria——Typhoid fever is reported to be prevalent in Natick South Natick Wellesley and Needham and impure milk is assumed by the State Board of Health to be the cause of the outbreak

New England Alumni.—At the meeting of the New England Alumni Association of Albany Medical College, held [illegible] ton October 9 Dr Harvey W [illegible] Allen [illegible] elected president, Dr Creight [illegible] vice president, Dr Alfred H [illegible] and Dr Walter C Murr [illegible] two latter being reelect [illegible]

College Opens—Tufts College Medical School has opened for its annual session Dr Frederick J Cotton has been appointed assistant professor of clinical surgery, Dr Gardner W Allen has resigned as assistant professor of genitourinary diseases, and Dr Charles M. Whitney has been appointed lecturer and Arthur L Chute instructor in this department Dr H Warren White has resigned as assistant professor of theory and practice of medicine

Personal—Dr Frederick E Jones, Quincy, has been appointed medical examiner of the county of Norfolk——Dr Walter B Cannon has been appointed George Higginson professor of physiology and Dr W T Porter professor of comparative physiology in the Harvard Medical School——Dr Hentve, Pottstown, has been appointed superintendent of the Framingham Hospital and Training School for Nurses——Dr Walter J Marcley, superintendent of the Massachusetts Sanatorium for Consumptives, Rutland, has been appointed provisionally to take charge of the Minnesota State Sanatorium for Consumptives, Walker——Dr Fred M. Stiles has succeeded Dr Henry D Chadwick, resigned, as president of the Waltham Medical Society

MICHIGAN

Pesthouse Robbed—The pesthouse of Ironwood was broken into a few nights ago and a considerable amount of bedding stolen

Academy Election—The annual meeting of the Detroit Academy of Medicine was held October 9 and Dr Delos L Parker was elected president, Dr Andrew P Biddle, vice president, and Dr Harrison D Jenks, secretary treasurer (reelected), and Dr Arthur H. Bigg, director

Communicable Diseases.—The health officer reports that there are at present 9 cases of scarlet fever in Muskegon——The health officer of Lansing reports 7 cases of smallpox, which are under quarantine——Several cases of measles have been discovered in Kalamazoo Street School, Lansing

Will Not Reinstate College—The State Board of Registration in Medicine, it is reported, has removed the name of the Michigan College of Medicine and Surgery from its list of schools whose graduates are qualified to be examined by the board On October 10 Dr Hal C Wyman appeared before the board to protest against this action, but the board refused to make any change, on the ground that the conditions complained of last June have not been altered during the summer vacation

Vital Statistics.—The deaths reported in August were 3,237, an increase of 458 over July, and an increase of 446 over the corresponding month of 1905 This was equivalent to an annual death rate of 14 3 per 1 000 Of the decedents 868 were infants under one year of age and 777 were individuals more than 65 Tuberculosis caused 224 deaths, typhoid fever, 45, diphtheria, 29, scarlet fever, 12, measles, 8, whooping cough, 43, pneumonia, 63, diarrheal diseases, 548, meningitis, 40, cancer, 150, and violence, 266 During the month 3,969 births were reported, equivalent to an annual birth rate of 18 1 per 1,000

Personal—Dr William M Bailey, Detroit, who was seriously injured in a street car accident, has so far recovered as to be able to be taken to his home from the hospital——Dr and Mrs Alexander G McLeod, Calumet, are at present in California——Dr James A Ardiel, Grand Rapids, has returned from Great Britain——Dr Fannie L Draper, Jackson, sails this month for Foo Chow, to take charge of the Methodist Hospital in that place——Dr O M Vaughan Covert, has been reëlected president of the Van Buren County Superintendents of the Poor——Dr Charles J Sorsen, Laurium, has returned from a trip abroad——Dr J Harry Cox has resigned as assistant mining physician at Painesdale for the Champion Mining Company——Dr W Cahn, Saginaw, has been appointed as assistant to Dr A D Aldrich Winona

MISSISSIPPI.

College Opens—The Mississippi Medical College Meridian, was formally opened for its first annual session, October 1, with about 100 students in attendance Dr William W Hamilton president of the college faculty called the assembly to [illegible] and addresses were delivered by the Hon Hardie R Stone Dr Nathan L. Clarke of the faculty, and E M Monies and R A Venable of the board of trustees Dr N L. Craig is dean of the faculty, Dr William W Hamilton, president Dr Thomas A Barber vice president Dr W O Bethea secretary and Dr Thomas J Houston secretary treasurer

Extension for Insane Hospital—The trustees of the Mississippi Insane Hospital, Meridian, have awarded the contract for a small dormitory, a four room cottage and a hospital building for the asylum, the latter to cost about $20,000

Von Gohren's Estate.—The estate of the late Dr Ludwig H Von Gohren, who died last month, at Bay St. Louis, has been appraised at $20,000

MISSOURI

Opening of Medical College—The Ensworth Central Medical College, St Joseph, opened for its annual session September 15

Phthisis Sanatorium.—It is proposed by the officials of Kansas City to establish a tuberculosis sanatorium, outside, but near the city, so that sufferers from tuberculosis who become public charges may be cared for A site is being considered on the highlands in Clay County, overlooking the Missouri River It is estimated that the farm can be purchased and the sanatorium equipped at an initial cost of not more than $4,000

Contagious Diseases.—The Eugene Field School, East Joplin, has been closed on account of exposure to diphtheria——One case of smallpox has developed in the State Industrial Home for Girls, Chillicothe. The building has been fumigated and all the inmates have been ordered to be vaccinated——The public schools of Pacific were closed October 3 on account of diphtheria——An epidemic of scarlet fever is said to be prevalent in the northern part of Jasper County and many country schools have been compelled to close

Personal.—Dr Christopher C Morris, superintendent of the St Louis Baptist Hospital, has returned from Europe, and was given a banquet by his medical associates October 1——Dr George O Coffin, Kansas City, has returned from Europe——Dr D E Wilhelm has been appointed assistant police surgeon of Kansas City, vice Dr George P Pipkin, resigned——Dr Herbert A Goshorn has been appointed assistant house surgeon at the Kansas City General Hospital

Hospital Items—The Kansas City General Hospital is expected to be under roof before cold weather sets in Provision is to be made for a temporary heating plant for the winter——The official reception of the Ellen M Osborne Hospital, St Louis, was held September 25——A jubilee service was held at the Mayfield Sanitarium, St Louis, when a $15,000 mortgage was burned by the surgeon in chief of the institution——An informal reception was held October 20 at the new hospital of the St Louis and San Francisco Railroad, St Louis The building is of fireproof construction and thoroughly equipped A novel feature in the institution is that inclines take the place of stairways and can be used by the patients either for walking or for rolling chairs The kitchens and dining rooms are located on the top floors Dr George W Cale, chief surgeon of the Frisco System, transferred his office from Springfield to the new hospital September 18, and the hospital was opened for patients October 22——The addition to the Deaconess' Hospital, St Louis, was dedicated with imposing ceremonies September 20 The cost of the building with the furnishings will exceed $90,000 and the building will accommodate 90 patients

NEW JERSEY

Brouwer Not Guilty—After a long trial Dr Frank Brouwer, Tom's River, indicted for murder of his wife by poisoning, was found not guilty, October 17

Genet Taylor Honored—The Camden County Medical Society tendered a banquet to Dr H Genet Taylor, October 9, at which Dr E. L B Godfrey responded to the toast of the honored guest Dr Joel W Fithian presided.

Sanitary Inspector Poisoned.—Dr Charles Cunningham, sanitary inspector of the Hammonton board of health, is ill from ptomaine poisoning, due, it is said, to a can of salmon

Local Society Organized—The physicians of Vineland have organized the Vineland Medical Society, with Dr Theodore Foot, president, Dr George Cunnigham, vice president, and Dr John H Winslow, secretary treasurer

Health Conference—The first annual conference of the state and local boards of health of New Jersey was held in the state house, Trenton, October 19 and 20 The conference was in charge of Dr C F Brackett, president of the State Board of Health, and the chief subjects discussed were

Every sanitary district should be provided with an isolation hospital

Abandoned wells should not be used as receptacles for sewage and waste liquids

Disinfectioon of infected apartments may be secured by washing floors woodwork and furniture with bichlorid of mercury 1 1 000 by the destruction by fire of articles of little value by boiling of infected wash goods and by treating woolen garments to exposure for 12 hours to formaldehyd

Infectious diseases should be reported to the local board of health and patients should be isolated

Local boards of health can render valuable service in preventing the sale of unwholesome milk and in the legislation for the abatement of nuisances Only those nuisances can be attacked which have caused or may cause sickness or death or which are prohibited by the law

Smoke nuisances and noise nuisances have not been proved directly to affect the public health

Joint municipalities of small population should join in the appointment of a health officer Among the important duties of boards of health is the periodic inspection of all buildings in their respective jurisdictions, to detect insanitary conditions Ordinances to prevent spitting on the floors of public buildings or public conveyances on sidewalks and street crossings should be passed and enforced by every sanitary district.

Measures for prevention of the spread of infectious diseases except in very rare instances should not include the closing of schools churches and public buildings

NEW YORK.

New York City

New Hospital Building—The New York Infirmary for Women and Children is raising money for a new hospital building, promises of over $94,000 having been received The present building has 70 beds, a dispensary and a large out door department Last year 1,043 patients were treated in the hospital 45,389 in the dispensary and 8,968 visits were made to homes of patients

The Carpenter Lecture—Dr Harvey Cushing Baltimore delivered the Wesley M Carpenter lecture at the Academy of Medicine October 18 His subject was "A Discussion of Some Early and Some Late Complications of Cranial Injuries and Their Treatment. Based on the Histories of Three Illustrative Cases" On this occasion the portrait of the late Dr Paul F Mundé, painted by Mrs Mundé and presented by Dr A Jacobi, was presented to the academy

Contagious Diseases—There was reported to the sanitary bureau for the week ended October 13, 390 cases of tuberculosis, with 169 deaths, 205 cases of diphtheria, with 22 deaths 113 cases of typhoid fever, with 15 deaths, 73 cases of scarlet fever, with 1 death, 50 cases of measles, with 2 deaths, 33 cases of whooping cough, with 11 deaths, 5 cases of cerebro spinal meningitis, with 4 deaths, and 9 cases of varicella, a total of 878 cases, with 224 deaths

New Hospital Pavilion.—A new pavilion to St Luke's Hospital was opened October 18 The wing is called the Margaret J Plant Pavilion, *after the widow of* Henry Bradley Plant, who contributed $450,000 of the $600,000 which the pavilion cost The purpose of the pavilion is two fold that patients of wealth may have the advantages of skilled hospital treatment and that the money derived from this source may be devoted to free wards The ward will accommodate 75 patients, and it is possible for those wishing to be cared for luxuriously to pay as high as $350 per week for accommodations The new building occupies one of the most commanding sites in the city, overlooking Morningside Park, and is built in the French Renaissance style

The City Milk Supply—The health commissioner Dr Darlington after spending a week in making inspections of the dairies throughout the state, is of the opinion that the milk supply of the city is better than it ever has been So far as the inspections go, there is an improvement of 100 per cent over the conditions last year, and New York is now receiving purer and better milk than ever before While the Board of Health does not condemn pasteurization, it believes that the only real safety for the consumer lies in a pure supply in the beginning, as pasteurization does not destroy the bacilli of tuberculosis The fact that milk is sold in 25,000 places in New York and that the daily consumption is about 1,500 000 quarts, makes it evident that the thirty inspectors now employed are not adequate to the task of inspecting all milk While the number of inspectors has been doubled during the past year there is still work for a much larger corps

NORTH CAROLINA

District Society Meeting—Dr James A Burroughs Asheville councilor for the tenth district has issued a call for a meeting of delegates from each county society in the district to be held at Asheville November 5 to organize the Tenth District Medical Society

Personal—Dr J Howell Way Waynesville has been appointed supervising state medical examiner for the Royal Arcanum——Dr H Q Alexander Davenport state senator from Mecklenburg County, is seriously ill with typhoid fever ——Dr John R Carr, Durham has gone to Vienna to study ——Dr Armstead K. Tayloe, Washington, was operated on at the Washington City Hospital for-appendicitis, October 9

Hospital Notes—Mr W F Snyder, Salisbury, has donated property valued at $13,000, with the sole restriction that the site shall be used permanently as a hospital for the people of that city An additional subscription of $7 000 was quickly secured and work on the erection is to begin immediately —— The new Rutherfordton Hospital was formally opened for reception of patients, October 10 It will be under the charge of Drs Henry Norris and Montgomery H Biggs, Philadelphia

OHIO

Fined for Illegal Practice—On October 3, "Dr" L. K Stoddard, New York City said to be an itinerant cancer specialist, *charged with the illegal practice of medicine*, was fined $25 and costs at Columbus

Addition to Hospital—As the present quarters of Mercy Hospital, Columbus, are overcrowded, the directors are planning to build an addition containing 50 rooms The cost of the building will be about $20,000

Communicable Diseases—Typhoid fever is reported to be epidemic at Kenton and Greentown, and a number of cases are reported from Toledo ——Diphtheria is reported to be epidemic at Clifton, Cincinnati, Cleveland and Springfield

Medical Library Open.—The Cleveland Medical Library Association opened its addition to the library building, October 7 The building contains a fireproof room for storing valuable goods and an auditorium seating about 300 people The cost of the addition has been about $20,000

To and from Europe.—Dr Alexander M Steinfeld, Columbus, has returned from Europe ——Dr Alfred S Maschke Cleveland, has returned after a year's absence abroad ——Dr Ode E Portman, Canton, sailed from Rotterdam, October 6 —— Dr Henry S Sheffield, Elyria, left September 17 for Europe

State Board Officers Elected—At a meeting of the State Board of Medical Registration and Examination for reorganization, the following officers were elected Dr Harris H Baxter, Cleveland, president, Dr August Ravogli, Cincinnati vice president, Dr George H Matson, Columbus, secretary, and Dr Sylvester M Sherman, Columbus, treasurer

Alumni Organized—The Cincinnati Chapter of the Alumni Association of Miami Medical College organized October 1, with the following officers President, Dr William H Campbell, vice presidents, Drs Abram D Murphy, Mrs Frances J Iliff, Clayton B Conwell and G K. Dennis, secretary, Dr George S Mytinger, and treasurer, Arthur J Markley

District Association Meeting—The third annual meeting of the Tenth District Medical Association was held in Lancaster October 4 The following officers were elected President, Dr W Stanley Samson, Lancaster, vice presidents, Drs Ralph W Holmes, Chillicothe, W P Snell, Mount Vernon, and Argus B Swisher, Marysville, and secretary treasurer, Dr John H J Upham, Columbus

Colleges Open.—The Cleveland College of Physicians and Surgeons opened for its annual session October 24 The principal address was given by Prof G O Headley, Ohio Wesleyan University on "Chemistry as a Servant of the Medical Profession"——The opening exercises of Toledo Medical College took place October 1——The Medical Department of Western Reserve University, Cleveland, opened for its regular session October 1

Personal.—Dr James T Hanson Gallipolis has been appointed superintendent of the Athens State Hospital ——Dr Van Wagner, Bridgeport, has been appointed health officer to fill the unexpired term of the late Dr William M Oates ——Dr Elias C Logsdon Zanesville is reported to be seriously ill with diphtheria ——Dr J Garfield Alcorn, physician to the state penitentiary Columbus has resigned to take up private practice ——Dr Henry Baldwin has been appointed health officer of Springfield vice Dr John M Buckingham deceased ——Dr James B Dougherty is ill with typhoid fever at his home in New Berlin ——Dr Albertus C Wolfe has been elected professor of therapeutics in the Ohio Medical University Columbus vice Dr Theodore W Rankin who has the chair of medicine in place of Dr George M Waters—Dr Hunter H Powell Cleveland director of the medical staff of St Anne's Maternity for 25 years was given a complimentary banquet, September 25 by his associate physicians at which the Sisters in charge of the hospital presen with a silver loving cup——Dr C F Reiff, Fremont, has been appointed a member of the Board of Public Service, vice Dr Martin Stamm, resigned

PENNSYLVANIA.

Medical Club Meeting—At the quarterly reception and meeting of the Medical Club, October 20, Drs Edward Anthony Spitzka and George McClellan, the recently elected professors of anatomy in Jefferson Medical College, were the guests of honor Officers were nominated, to be balloted for in January

Bequests—Bequests of $3,000 each were made to the following named institutions by the will of the late George W Fox Friends' Asylum for the Insane, Little Sisters of the Poor, and the Home for Aged and Infirm Colored People——By the will of the late Julius Streeter, the Protestant City Mission receives $6,000

Personal—Sir Almroth E Wright, M.D, F R S, London, delivered a lecture in the College of Physicians, October 22, on "The Treatment of Bacterial Diseases by the Inoculation of Corresponding Vaccines"——Dr David Birney was thrown from his carriage October 14, and painfully injured——Dr DeForest Willard, who has been ill for several months, has recovered and is now at Hot Springs, Va

Health Report—The total number of deaths reported for the week aggregated 460 This is a decrease of 24 from the number reported last week, and an increase of 71 over the number reported in the corresponding week of last year The principal causes of death were Typhoid fever, 13, diphtheria, 13, consumption, 60, cancer, 21, apoplexy, 15, heart disease, 53, respiratory disease, 45, enteritis, 24, Bright's disease, 39, suicide, 4, accidents, 11, and marasmus, 9 There were 202 cases of contagious disease reported, with 29 deaths, as compared with 202 cases and 19 deaths reported in the preceding week

Home Selected for Criminal Insane—The selection of the site in Wayne County for the State Hospital for the Criminal Insane was approved by Governor Pennypacker, October 17 The land selected is composed of 625 acres and was secured for the nominal consideration of $5 The land was really the gift of the Delaware & Hudson Railroad Company, and is located at Far View, 20 miles from Scranton Culm banks on the land will, it is said, yield coal enough ot supply the institution for 20 years There is an abundant flow of pure water from springs and small streams The greatest elevation is 2,000 feet above sea level

State Asylum Crowded—The report of the State Hospital for the Insane, Norristown, shows that the buildings are entirely inadequate to the demands In the present female buildings the normal capacity accommodates 985 women patients, but 1,277 are being cared for The condition of the male department is still more crowded and for the 1,255 patients only 128 attendants are available The admissions to the institution are rapidly on the increase, and only two improvements have been made by the state during the last four years In the building assigned to violent women, which was originally constructed to accommodate 80 patients, 229 are now being treated

VIRGINIA.

Arrested for Selling Cocain—Eight negroes were arraigned at Alexandria, October 13, to answer the charge of selling cocain

Personal—Dr A S Priddy, Bristol has been appointed superintendent of the Southwestern Hospital for the Insane, Marion, vice Dr Robert J Preston, deceased——Dr John E Harris Berryville, has been appointed local surgeon for the Norfolk and Western Railway——Dr James F Bryant, Franklin, has been appointed surgeon general of the first brigade, Virginia Division, United Confederate Veterans, vice Dr John H Claiborne, Petersburg, deceased

Colored Society Election—The second annual session of the Dominion Medical and Surgical Society ended at Richmond October 4 The following officers were elected President, Dr Charles R. Alexander, Petersburg, vice presidents Drs Robert J Boland, Roanoke, and R. A Michael Surrey, corresponding secretary, Dr Harrison L. Harris Richmond recording secretary, Dr J A Crowder, Petersburg treasurer Dr Robert F Jones Richmond and journalist Dr Edward R Jefferson Richmond The society considered subjects relative to the hygiene and sanitary conditions of the colored people and the questions of tuberculosis, malaria and other diseases which increase the death rate among the urban colored population

WEST VIRGINIA.

Leper Dies—George Raschid, the Assyrian leper, whose travels through West Virginia and Maryland a few months ago came near causing serious complications between the authorities of these states, died in a shanty near Pickings, W Va, from heart disease, October 19 The body is said to have been cremated in the shanty in which he had lived, by order of the county authorities

GENERAL

Alvarenga Prize—The College of Physicians of Philadelphia announces that the next award of the Alvarenga prize, being the income for one year (about $180) of the bequest of the late Señor Alvarenga, will be made on July 14, 1907, provided that an essay deemed worthy of the prize shall have been offered. Essays may be on any subject in medicine, but can not have been published They must be typewritten, and must be received by Dr Thomas R Neilson, secretary of the college, on or before May 1, 1907 Each essay must be sent without signature, but marked with a motto and accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author

CANADA

University News—Sir Wilfrid Laurier, prime minister of Canada, has made the University of Laval the beneficiary of an insurance policy on his own life for $5,000 His example will probably be followed——The dominion government will be asked to grant $25,000 to further equip the biologic and bacteriologic departments of Queen's University, Kingston

Winnipeg Medical Society—The first regular meeting of this society was held October 5, when the president, Dr Gordon Bell, delivered the annual presidential address The following officers were elected President, Dr E W Montgomery, vice president, Dr J R. Davidson, second vice president, Dr N J McLean, secretary treasurer, Dr C H. Vrooman, councilors, Drs McKenty, MacKay, Galloway and Todd

Hospital News.—Winnipeg General Hospital treated 397 patients during the week ended October 13, 237 were men, 127 women and 33 children The out patients numbered 85——The Winnipeg Isolation Hospital is quarantined with 25 smallpox patients——Dr Alex. Campbell, superintendent of the Winnipeg General Hospital, who has been ill with appendicitis for two weeks, is again attending to his duties——Virden (Man) Hospital was opened October 9——A new hospital is to be established at Selkirk, Man, and the subscriptions now amount to $4,200——Dr F Montizambert, director general of public health, Ottawa, is at Victoria, B C, in connection with improvements to the leper hospital at D'Arcy Island

Quebec and Reciprocity with Great Britain—The College of Physicians and Surgeons of Quebec, at a meeting held September 26, took the first step toward securing reciprocity with Great Britain, as provided for in the General Laurie Amendment (1905) to the British Medical Act, by adopting the following resolutions, the latter of which having appended to it the subsequent proviso

Resolved That the College of Physicians and Surgeons of the Province of Quebec beg the legislature of the Province of Quebec at its coming meeing to send a request to his majesty's privy council demanding the application of the Medical Act of 1886 and the amendments of 1905 to the Province of Quebec

Resolved That on a favorable answer from the privy council the College of Physicians and Surgeons of the Province of Quebec enter on the necessary negotiations with the General Medical Council of Great Britain in order to assure the establishment of reciprocity between Great Britain and the Province of Quebec

Provided That those who having obtained the British license and are demanding the license of the Province of Quebec, shall prior to their British registration have fulfilled all the requirements of our medical act in regard to the obtaining of our license

The idea of this proviso is designed to prevent "irregulars" in the province of Quebec crossing the Atlantic and securing registration in Great Britain and then returning and demanding and compelling their registration in the Province of Quebec.

Canadian Societies Oppose Low Insurance Fees—The *Bulletin Médicale de Québec* for September contains reports of several county society meetings in which the question of life insurance fees was taken up The Arthabaska society postponed the discussion until greater harmony on the subject prevailed but the Portneuf society adopted a resolution fixing the minimum rate for a life insurance examination at $5 and for a lodge at $2 The societies at Joliette Beauce and Chicoutimi have taken similar action and several members of the Joliette society reported that the insurance companies had paid the fee without protest The Portneuf secretary writes that in certain districts where this fee is in vogue the insurance agents take "ambulant physicians" with them to make the examinations, who charge only $3 or less for their services He adds "We are not acquainted yet with this race of ambulant physicians, but its existence seems to be established We are told that it originated in the cities Those who have had opportunity to study specimens of this new species close at hand write that they have the same appetites, the same manners and the same customs as charlatans At the risk of attracting some specimens of this new species into our domain the society proposes to adopt the new tariff, although it will not go officially into effect until the next meeting of the society In the meanwhile the members are free to adopt it individually at any time" A proposal was received from the Joliette society asking that the members of all the neighboring county societies agree to publish their articles in the same medical journal, so that by subscribing to this journal a complete file of the proceedings of the various medical societies can thus be kept The proposal was rejected as too exclusive a measure

FOREIGN

The Schaudinn Endowment.—The German Dermatologic Society, at its recent annual congress, appropriated $1,250 to be presented to the Schaudinn endowment fund, and also voted to have the volume of its transactions dedicated "In Memoriam Fritz Schaudinn," with a reproduction of his portrait

Behring's Tulase Reported Ineffectual—Bernheim of Paris is the president of the *Oeuvre de la Tuberculose Humaine* He created a sensation at the recent Antituberculosis Conference by reading an article describing his examination of a number of patients who are being treated by Krehl with Behring's tulase Krehl himself was away on a vacation, but Bernheim was given every opportunity to examine the patients, study their clinical charts, etc, and he announced that the tulase treatment had evidently proved completely ineffectual

Unsuspected Leper Town in Portugal.—The cable states that the town of Castroverde, 50 miles from Lisbon, attracted the attention of the authorities by its high death rate Medical experts sent to investigate the cause found 127 cases of leprosy among the inhabitants, the disease never having been recognized before, and no measures having been taken to isolate those affected or to prevent their going to other towns The place has been quarantined now, and the entire country is on the alert to discover cases of leprosy elsewhere

Seventieth Birthdays of W Waldeyer and E von Bergmann.—Waldeyer's seventieth birthday was celebrated by his friends October 6, but von Bergmann's does not occur until December 16 Waldeyer's works embrace nearly every field of morphology, and he was the first to proclaim that the cancer cell is an epithelial cell, which conception Virchow did not accept. Waldeyer's name is familiar from his numerous topographic works his collective reviews of various subjects, his successful career as a teacher, his faithful attendance at all medical anthropologic and anatomic congresses, and his devoted services to the local scientific societies The *Deutsche med Wochschr* for October 4 gives a sketch of his career, with his portrait

Vital Statistics in Constantinople.—According to the Constantinople correspondent of the *Lancet*, the new and energetic prefect of Constantinople, Reshid Pasha, is about to introduce a sanitary reform, which, if realized, will prove to be of great service to the population of the Ottoman metropolis He intends to reorganize the public service of vital statistics which up to now has been in a very unsatisfactory condition, and to introduce sanitary statistics of a more regular and precise character The sanitary inspectors of each municipal district will henceforward have to furnish exact information concerning the different infectious diseases The precise number of persons suffering from these maladies will also have to be recorded and much greater attention will be paid to the rate of mortality A Turkish newspaper states that it is desirable to include in this sanitary reform the whole Ottoman empire and to enjoin on the provincial sanitary inspectors the duty of sending to the prefecture of the capital regular monthly reports concerning the vital statistics of their vilayets

The Rémond Nursery at Lyons.—An endowed institution has recently been opened at Lyons to receive healthy babies born prematurely or under weight from other causes The institution is connected with an outlying public convalescent home, and all the infants born at the maternities in town under normal weight are sent there and nursed at the breast under constant medical oversight, until they reach the average weight for infants of their age There are three buildings, each entirely separate and arranged for eight wet nurses and 16 nurslings The nurses are mothers from the maternities who are paid a small sum daily for each child they nurse, both their own child and the foster child The most scrupulous care is taken to exclude every possible chance of infection, the mere suspicion of syphilis or other contagious disease in the mother or child excluding the infant from the "Nourricerie" In case infection should occur in one of the buildings, that one can be closed and disinfected without interfering with the workings of the institution as a whole The way in which the infants thrive is the most eloquent testimony to the value of such an institution, the nurse, her child and the foster child, all prospering far beyond the average, according to Plauchu's report in *Obstétrique* for September

Plague Conditions in Calcutta—Consul General Michael, Calcutta, reports that the most prominent feature in the plague history of Calcutta is the alarming recrudescence of the disease, the mortality from which having declined from 8,222 in 1903 to 4,689 in 1904, again rose to 7,011 Other disappointing features of the year's plague history were the increased virulence of the disease and the conspicuous increase of mortality in the sparsely populated areas to the south of the town The measures taken to combat the disease underwent considerable alteration during the year A large staff of medical inspectors was employed to investigate the cause of all deaths in the city from whatever cause, and these investigations throw considerable light on the causes of general mortality The demolition of plague infected huts has been abandoned, because, in the absence of any arrangements for rehousing the dislodged population, demolitions aggravated the evils of overcrowding in the vicinity of operations A satisfactory feature of the year's work was the far larger percentage of living cases ascertained The statistics of the year's work confirm the facts previously reported in regard to the small number of houses in which plague infection occurs Even in the case of houses in which more than one death occurred the infections were generally simultaneous It is noteworthy also that the mortality in kutcha huts was about double that in masonry houses, where most of the cases occurred on the ground floor The reason may possibly be that infection is more easily carried on mud floors than on masonry plinths, which can be more thoroughly cleansed Little success was attained in the crusade against rats although various methods of destruction were employed Little progress was also made with inoculations, which are still unpopular The question whether it is possible to pass by laws under the municipal act to compel owners of grain godowns to make them rat proof has been referred to the advocate general for his opinion

Second International Congress for the Insane—This congress was held recently at Milan, Tamburini presiding Marie of Paris delivered an address on the necessity for farm colonies for the insane, for epileptics and for backward adults Lucien Graux urged the establishment of special public institutions for the hospital care of the nervous, public sanatoria for the nervous in hygienic sites, open to anyone without previous declaration A resolution proposed by Mariani was adopted urging that in countries in which the mild cases of insanity are not yet boarded out in families a committee of alienists, appointed by the *government, should draw up a set of plain* simple, detailed instructions explaining the essence and the aims of "familial assistance" of the insane and that a copy of these instructions should be placed in the hands of every country physician, without exception, with the request that he should inform the rural population in regard to the matter and use his influence for the adoption of the system and to further its workings Another resolution urged the care of persons predisposed to insanity, and of persons dismissed from asylums, facilitating their return to normal work and watching over the moral and material welfare of their families coördinating for this purpose the efforts of the charitable municipal and medical organizations Another resolution urged the fusion of the various organizations that care for the insane, for backward children alcoholics and criminals, as there are so many connecting links between them and combined effort will be much more effectual. The fifth resolution was devoted to special prophylactic and curative measures in regard to the tuberculous insane both those boarded out in families and those in asylums The sixth resolution asked that mentally deficient children should receive special medico-pedagogic training On the recommendation of Frank of Zurich it was voted to organize an international committee for the etiologic study of and for prophylactic action in regard to nervous and mental affections and the causes entailing them

The committee will organize an international institute for these purposes and will strive to obtain the coöperation of the various governments to complete and coördinate investigation into the causes of degeneracy, so as to propose remedies The transactions of the congress are being published in the *Archives de Neurologie* and other special journals

LONDON LETTER.

(From Our Regular Correspondent)

London, Oct 13, 1906

A Villa Asylum for Lunatics

Lord Roseberry opened at Bangour, in Linlithgowshire, an asylum which the lunacy board of Edinburgh has erected on the villa or segregate system for the care of the city's insane poor This is the first complete example in Great Britain of this form of asylum Accommodation will be provided for 1,000 inmates

Body Exhumed as the Result of an Unfounded Attack on a Physician.

An inquest has been held under extraordinary circumstances on the body of a widow, aged 63, who died Dec 1, 1905 About two months ago the body was exhumed and an inquest was held, which was adjourned The exhumation took place at the request of the brother of the deceased, who made an affidavit that the physician was in a great hurry to get the body buried. As a matter of fact, the burial took place six days after death The brother also stated that he believed that the death of his sister was due either to administration of improper drugs or to incorrect treatment At the inquest the doctor stated that he had first treated the woman in 1898 for dyspepsia Three years later symptoms of cardiac degeneration set in In 1904 Dr Rose Bradford saw the patient with him and entirely agreed with his treatment. As to the funeral, he had nothing to do with it. Evidence was given by Dr Willcox, analyst of the home office, and Dr F J Smith, professor of forensic medicine at the London hospital, that the body showed no indications whatever of poisoning The jury returned a verdict that the certificate of death given by the doctor was perfectly correct and that there was no ground for the imputations made

The Specificity of Agglutinins

Dr Sidney Martin F R S, reports experiments undertaken to determine whether the agglutins formed in the rabbit in response to infection with the colon bacillus, the typhoid bacillus, the paratyphoid bacillus and the *B proteus vulgaris* have any effect on each of the other microbes He finds that the agglutinin of the *B proteus vulgaris*, although very active against this microbe has no action against the other bacilli mentioned. The *B proteus vulgaris* is, therefore, widely separated from the other three bacilli not only by its culture and chemical characteristics, but also by the agglutinins it forms in the living body The other bacilli show some overlapping in their agglutinating reactions Thus the agglutinin of the typhoid bacillus formed after prolonged treatment of the animal reacts slightly with the colon bacillus and with the paratyphoid bacillus In most cases, however, the reactions were incomplete The agglutinin of the colon bacillus reacted very slightly with the typhoid bacillus and not at all with the paratyphoid bacillus The agglutinin of the paratyphoid bacillus, on the other hand reacted slightly with the typhoid bacillus and more markedly, though somewhat irregularly, with the colon bacillus

Identification of Skin Bacteria.

Dr M H Gordon has endeavored to establish a bacteriologic test by which particles shed from the skin may be detected in air This test is based on the fact that although a variety of staphylococci occur on the skin there is no staphylococcus which on the application of differential physiologic tests shows characteristics permitting of its ready distinction from other staphylococci This organism occurs far more frequently than any other variety It frequents the epidermis of the hand, cheek scalp and forearm with such persistency that it may be considered characteristic thereof in much the same way that *B coli communis* is characteristic of the large intestine, and *brevis* of the mouth Dr Gordon believes this staphylococcus to be identical with the organism observed by Welch and named by him *Staphylococcus epidermidis albus* Dr Gordon also describes another staphylococcus which he finds particularly abundant on the scalp It possesses characters by which it can readily be differentiated from other staphylococci, and it is particularly serviceable in detecting particles of scurf Dr Gordon examined outdoor and indoor air with the view of determining whether his tests could be relied on for detecting in air the presence of skin particles detached from the human body and obtained very encouraging results On three occasions he examined open air for staphylococci characteristic of skin Although seventeen different kinds of staphylococci were obtained, not one of them could be identified with *Staphylococcus epidermidis albus*. On the other hand, this staphylococcus was obtained in the air of barber shops and in the air of an operating theater during use

The Wellcome Research Laboratories

The second report of the laboratories attached to the Gordon Memorial College at Khartoum and founded by Mr H S Wellcome has been published The editor and director of the laboratories, Dr Andrew Balfour, less than three years ago started work at Khartoum with one laboratory boy and two black servants He is now aided by a chemist, a traveling naturalist, an economic entomologist and two European assistants Two Carnegie research fellows have been invited to conduct investigations there, the one working on chemical, the other on bacteriologic or pathologic lines A floating laboratory for collecting museum specimens from the various rivers will soon be organized The anti mosquito work is most successful Originally more than half of the wells and pools were infected, now anopheles and malaria are practically banished and the stegomyia is seldom found The amount of oil that had to be used per well was found to never exceed half a pint, and even two ounces were found ample if none was lost in splashing Only six men are engaged in this work under an English inspector, so that for less than $500 per annum Khartoum is kept practically free from malaria and from the perpetual torment of mosquitoes Dr Balfour states that 16 genera comprising some 35 species culicidæ have now been found in the Soudan

The Transmission of Plague by Rats.

In his recently issued report to the local government board Dr Klein reports some important experiments on this subject Most investigators have met with little or no success when they attempted to produce plague in rats or other animals by feeding them with plague cultures or with fresh organs of animals dead of plague Dr Klein has repeatedly fed guinea pigs, rats and mice without positive results It occurred to him that the reason of the failure was that the bacilli were destroyed by the secretion of the stomach during digestion. He suspected that if the bacillus could reach the small intestine in living state its power of multiplication would not be destroyed, but might, on the contrary, be assisted by the alkaline medium found there To test this theory, he fed animals with plague bacilli either in a dry state with the food or sufficiently protected to enable them to pass through the stomach unscathed. He used gelatin cultures from two weeks to two months old which had become dried, though they still contained active bacilli He found that this material either alone or mixed with wheat or rice and then well dried was capable of infecting rats, mice and guinea pigs fed with it Similar results were obtained when pieces of plague organs were mixed with wheat, rice or flour and then dried. A considerable proportion of the animals were infected and died between the fourth and sixth days It was found that the infection took place in the ileum at or about Peyer's glands In this locality there was hemorrhage with great multiplication of plague bacilli This condition was found not only in the cavity of the intestine and on the free surface of the mucous membrane, but also within the villi themselves and in all parts of the intestinal wall It also spread to the mesenteric glands, which in turn infected the vascular system of the other viscera with crowds of bacilli The intestinal and renal excreta of animals infected in this way contain numerous bacilli Hence in natural infection such excreta when mixed and dried with foodstuffs provide a ready means of spreading the contagion These investigations suggest that man may contract the disease through the intestinal tract from ingesting food contaminated with plague material in a semi dried condition A similar suggestion has been put forward by Dr Simpson with regard to the origin of the septicemic form of plague in man Dr Klein also investigated the degree of resistance against desiccation which the plague organism exhibits when associated under diverse conditions with various materials, such as foodstuffs, earth and sand The vitality of the bacillus added to earth and sand in the form of a gelatin culture remained during the autumn for a long time unimpaired—in earth even after seven and one-half weeks and in sand over six weeks In summer the duration of vitality was not so long These experiments show the possibility that under natural conditions during plague seasons plague expectoration and intestinal mucus charged with masses of the bacillus may remain infective for a dangerously long period

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, Oct 8, 1906

Vienna from the Medical Student's Point of View

As a large and constantly increasing number of American physicians come every year to Vienna for the purpose of studying in the extensive hospitals here, a few lines regarding the accommodations, attractions, the facilities for learning and hospital advantages in this city may be useful to those who intend to come here Vienna the capital of Austro Hungary, is a city of 1,980,000 inhabitants, and is situated in the center of a very important line of commerce and travel, thus being the natural place for the government and official bodies As the number of hospitals and able doctors in the provinces beyond is none too large, numerous cases of disease come voluntarily or are sent by their doctors to the capital, so that the population, whence the hospitals draw their material, may be safely estimated to be upward of 3,000,000 For the army of patients there are altogether nine large public hospitals so that the educational facilities are fairly centralized and a good supply of interesting cases guaranteed In parentheses it may be added that the system of private hospitals is hardly known here, so that nearly all the hospital patients come under the heading of those available for instruction The chief or general hospital, Das Allgemeine Krankenhaus, an ancient building with more than 2,000 beds, in which all the stars of the Vienna medical school used to teach, comprises three clinics each for surgery and medicine, each with about 100 beds, two clinics each for gynecology, dermatology and syphilis, ophthalmology, mental and nervous diseases, and one each for otology, laryngo rhinology and pediatrics Apart from these clinical wards, which are devoted specially to the purposes of clinical lectures and teaching, there are surgical, medical and gynecologic wards, and "extraordinary professors," from whose ranks the "regular professors" are chosen Of the clinical teachers some have a well known name, like Pollitzer, Schrötter, Chiari, von Noorden, Neusser, Finger, Hochenegg and Fuchs Many of them not only speak English fluently, but also lecture in the English language in special classes In the gynecologic clinics, which are united with the maternity department, and are under Professors Chrobak and Schauta, over 8,000 lying in cases are managed yearly, a number sufficient to supply the student with a good experience

Besides this general hospital there are the Wiedner Hospital, the Rudolf Hospital and the Poliklinik, connected with the medical department of the university, in which clinical lectures are given also by professors during the "semesters" or terms The winter semester lasts from October till March 31, the summer semester from May 15 to July 15 The fees for clinical "semester" lectures are low, about $6 being the maximum, while special lectures are more expensive A very good opportunity for anatomic and dissecting work is offered in the "Anatomisches Institut," under Professors Zuckerkandl and Toldt, for pathologic anatomy and bacteriology in the Pathologisch anatomisches Institut, under Professors Weichselbaum and Kretz, and for histology of the nerves in the institute of Professor Obersteiner In these official "institutes" the fees for working and material come to something like $10 to $15 per term of eight weeks A completely new and modern building is now ready for the study of physiology, under Professor Exner, and ample means for research are provided for those students who desire to devote their time to this branch

As all the medical teaching is governed by the senate of the medical faculty of the university, and as the university itself is a central institution, there is an enormous advantage in the fact that all the accessory institutions mentioned above are in the same quarter or district of Vienna, called Alsergrund, and are within easy access of each other In the same district are numerous opportunities for cheap and good lodging For the last few years this whole part of the district has been used by medical students as lodging quarters, and the tenants of the flats make it their special business to let rooms to this class of lodgers A good, quiet room may be rented for $8 to $12 a month (there is no weekly payment here) near all the central institutes, and sometimes board may also be obtained for about $30 or $35 a month, but it is possible to get it even much cheaper, so that $8 to $10 per week should cover the expenses of a decent mode of living There are also private dining houses for medical students with low prices Several boarding houses of the English fashion are also to be found in Vienna but they are of course, more expensive For the information of those who are planning to stay in Vienna, I may mention the following streets as suitable and convenient Spitalgasse, Alserstrasse, Lazarethgasse, Pelikangasse, Kochgasse, Skodagasse, Schlösselgasse, Währingerstrasse and Garnisonsgasse If board is not obtained with the room, there are good restaurants with excellent food and low prices in these streets, and cafés with their world renowned Vienna coffee and rolls for 10 cents (equal to 50 hellers or half a krone) A cup of splendid coffee with white rolls may be had at any time, while a good dinner can be had for less than half a dollar, and a supper for 30 cents is very good

These figures are meant for a good but not luxurious mode of living Of course, there is no limit for one who wants to spend more The best way of getting out of culinary troubles is to combine a few gentlemen who are willing to dine together Some landlady is always ready to cook for them Gentlemen coming over with their families have also no trouble in finding rooms or furnished flats according to their wishes

There is an "American Medical Society" in Vienna, in which new arrivals will be cordially received, and where they may obtain information on all subjects concerning lodging, board and medical courses The seat of this society is in the Café Klinik, corner of Spitalgasse and Lazarethgasse, opposite the General Hospital. The Journal will be found on file there The present secretary is Mr Herrman L Kretschmer, Schlösselgasse 13/9 The society conducts many lectures and special courses, and nearly all English speaking physicians in Vienna, both from England and America, are members of the society Further information may also be obtained at the Pension Welser, Vienna IX, Höfergasse 5, where members of the society meet for their meals Membership in this society actually means the removal of all difficulties from the path of the newcomer The best means of getting information is to write to or speak personally with the secretary of the American Medical Society, Vienna IX, Café Klinik, Spitalgasse For those who wish to read in the library there are two well equipped libraries One is the large reading room (Lesezimmer) of the "Universitäts Bibliothek," comprising about 400,000 books, and the other is the "Aerztliches Lesezimmer" in the hospital, with about 22,000 books and periodicals English medical works are provided in abundance, and access to these libraries is easily obtained. Gentlemen who wish to spend a longer time in the wards find it not a difficult matter to obtain the post of "hospitant" in the wards They have the same rights as ordinary hospital officers, but not their duties, and are unpaid Thus, for instance, the clinics for dermatology medicine, syphilis, eye diseases and otology are frequented by American "externes" or "hospitants"

As regards the classes arranged by privat docents and various professors, the following may be mentioned Professor Kovacs has diagnostic classes for internal diseases, $10 for six weeks, very many American students, hematology by docent Türck, $25, four to six weeks, surgery of the genitourinary system, docent Zuckerkandl, $20, four weeks, many English surgeons, gynecology and dermatology, especially for Americans, surgery of the ear by Alexander, Neumann, Hammerschlag, $15 to $20, six to eight weeks Hajek's classes on rhinology are well known, also those of Chiari and Koschier The fees are between $20 and $40, including operations on patients Surgical practice on the cadaver is obtainable as a special course Urbantschitsch and Pollitzer's classes on otology are well frequented by English speaking physicians, and Finger's English classes on dermatology are an old established institution Furthermore, it is possible to get up a special class for nearly any branch of medicine, if the lecturer is guaranteed a minimum fee of a sum varying between $100 and $150 for the whole class so that there is a vast opportunity for both practical and theoretical teaching at a low cost to the individual members of the class

The situation of Vienna amid fine picturesque scenery, within easy reach of the Alps—a two hours' railway ride brings one to the Schneeberg, 5,900 feet high, or to other high mountains—makes it a very pleasant place to live in The water supply is considered to be among the best if not the best of all large towns, so that typhoid or other water borne epidemics are actually absent The death rate for the last decade is constantly declining and stands now at 18 7 per 1 000 The only drawback is the prevalence of tuberculosis, but this may be safely overlooked, as only the poorer classes of the population are affected in a degree higher than in America, while the classes with which the student comes in contact are just as healthy and clean as anywhere else Vienna is a rich healthy beautiful and quaint capital, with unparalleled opportunities for cheap and world renowned medical education, so [illegible] time and money are well spent

Pharmacology

THE POPULAR SYNTHETIC REMEDIES, THEIR USE AND MISUSE

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[Dr. J. O. Schlotterbeck, a member of the Council on Pharmacy and Chemistry, in a paper read before the Wayne County (Mich.) Medical Society, and published in the *Journal of the Michigan State Medical Society*, calls attention to the increasing employment by the medical profession of various proprietary articles and also mentions the laxity in the use of the word synthetic. From his article we quote.]

It was not uncommon to hear the word used indiscriminately in connection with true synthetics, fictitious synthetics, decomposition products, and even mixtures pure and simple. This is not surprising when we consider that some knowledge of the chemistry of a compound is essential to a proper classification, and further that the terminology of the majority of the army of new remedies is anything but suggestive of composition. In fact, it may be said that many of the titles appended to new remedies have for their chief recommendation brevity and euphony, in addition to an utter lack of significance. Again, owing to the relatively slight attention given to the subject of organic chemistry in medical colleges in the past as well as the present, many physicians are not in a position to distinguish between classes of chemical remedies, even when a scientific or semiscientific nomenclature is employed. A very prominent physician recently expressed his belief that the status and efficiency of the medical profession would be largely enhanced if some of the spectacular courses of present day medical curricula were replaced by more thorough training in the chemistry, pharmacology and prescription of definite chemical compounds. It is needless to say, it is scarcely open to argument in fact, that in this age of synthetic remedies the physician should have at his command a discriminating knowledge of organic chemistry.

But what is a synthetic compound? Let us compare the preparation of a synthetic with the construction of a building, a rather homely illustration, but one which will answer the purpose. Edifices of widely differing architecture are constructed by bringing together not in a heterogeneous mixture, but according to definite plans, a number of structural units more or less different in character. When the buildings are finally completed we have new structures entirely unlike the units of which they were built. They are comparable with the synthetic compounds prepared in the laboratory. Now, if an edifice be demolished and resolved into the original structural units or elements of which it was composed, these units could be compared with decomposition products when a compound is subjected to analysis. Synthetics are made by the established chemical process called synthesis, which is the uniting of simple compounds or elements to produce complex ones. Synthesis is, therefore, a constructive process, the opposite of analysis, which is a destructive or demolishing process.

A scientific illustration of the principles of synthesis and analysis is well exemplified in the investigation of the composition of water, one of the first experiments which the beginner in chemistry performs. By electrolysis water is decomposed into its elements, hydrogen and oxygen, in the proportion of two volumes of the former to one volume of the latter. This you will recognize as the analysis of water. Now, by exploding this same mixture of hydrogen and oxygen with the spark from an induction coil, the elements unite chemically with the formation of water. This is clearly the synthesis of water.

In the domain of organic chemistry the construction of the pharmacopeial synthetic hexamethylenamina, better known by the names urotropin and cystogen, is a little more complex but readily understood. When a mixture of stronger water of ammonia and solution of formaldehyd in certain proportions is allowed to stand for about twelve hours, a condensation takes place and the famous urinary antiseptic is formed. The reaction takes place according to the following equation:

$$4NH_3 + 6CH_2O = (CH_2)_6N_4 + 6H_2O$$

This is one of the simplest illustrations of synthesis.

Apomorphin is a well known article of the pharmacopeia, which is often incorrectly classed as a synthetic. When the alkaloid morphin is heated in a sealed tube with strong hydrochloric acid, it is broken up into two new compounds, the base apomorphin, and water, as folows:

$$C_{17}H_{19}NO_3 = C_{17}H_{17}NO_2 + H_2O$$

The identity of the original alkaloid is destroyed and the resulting product is less complex than the morphin. The apomorphin was obtained by a destructive or analytic process, therefore, it can not be called a synthetic product, but rather a decomposition product, or a derivative of morphin, if you wish.

While the chemist uses the word synthesis and, therefore, synthetic for all compounds, whether organic or inorganic, made by the constructive process, the physician and the pharmacist commonly connect the word with organic compounds used in medicine.

There is a firmly established impression among a large class of pharmacists and physicians that all synthetics are coal tar products. This is far from the truth. A little later I will show that there is a very large proportion not derived from any of the products contained in coal tar. When bituminous or soft coal is subjected to destructive distillation, that is, heated in retorts without excess of air, the compounds originally existing in the coal are split up into simpler ones, some of which are gaseous, some liquid and some solid. The coal gas, when it leaves the retort is passed through water, which absorbs the ammonia, the resulting gas water being our principal source of ammonia. The coal tar was formerly considered a nuisance and could be obtained for the manufacture of sidewalks and pavements at a very low figure. It is still used to a slight extent in my home city for that purpose, but I doubt very much that the average citizen of Detroit gets an opportunity to see and smell coal tar. It is one of the most valuable by-products in the manufacture of coal gas and commands a ready market, because of the valuable constituents it contains.

When coal tar is subjected to fractional distillation that portion of the distillate which floats on water is called light oil. That which has approximately the specific gravity of water, and, therefore, swims in water, is called dead oil, and that which sinks in water is called heavy oil. A further fraction obtained at temperatures as high as 400 degrees C. constitutes anthracene oil from which the parent substance of many coal tar dyes is obtained. The residue in the retort is pitch, used in making varnishes, etc. This classification of the fractions is not uniform with all producers, some collecting more fractions and others less. Over eighty different chemical compounds have been isolated and identified in the fractions obtained in the distillation of coal tar, but there are only a few of these of great commercial importance because of the cost of separation. The most important products are benzene or benzole from the light oil, naphthalene or tar camphor from the dead oil, phenol or carbolic acid from the heavy oil, and anthracene from the anthracene oil.

It may be of interest to show by materials and formulæ how one of the most popular classes of synthetic antipyretics is developed. When benzene (not benzin obtained from petroleum) is treated with strong nitric acid under certain conditions, the nitric acid radicle NO_2 enters the benzene nucleus or ring and water is split off. The resulting compound is a yellow liquid of bitter almond odor but of altogether different composition from the true oil of bitter almond. This oil is commonly called oil of mirbane and is used to perfume cheap soaps, floor oils, polishing pastes and so on. When this nitrobenzene is reduced by means of Fe and HCl, whereby nascent hydrogen is generated amidobenzene or phenylamin is formed. The common name for this compound is anilin or anilin oil. It is poisonous and was once administered in the form of the sulphate and hydrochlorid as an antipyretic. It was this property of anilin that suggested the introduction of acetanilid. Now by boiling anilin oil with glacial acetic acid, H_2O is split off and the acetyl group or acetic acid radicle replaces the hydrogen of the amido group with the formation of acetanilid This is easily purified by recrystallization

This series of reactions will show how easily and cheaply this synthetic is made

1 $C_6H_6+HNO_3=C_6H\ NO_2+H_2O$
Nitrobenzene

$C_6H_5NO_2+2Fe+6HCl=C_6H\ NH_2+Fe_2Cl_6+2H\ O$
Amidobenzene or Anilin

3 $C_6H\ NHH+HOOC\ CH_3=C_6H_5NH\ OC\ CH_3+H\ O$
Acetic Acid Acetanilid

By substituting other acids for acetic acid a great variety of derivatives can be made with physiologic action, on the whole the same as acetanilid If salicylic acid be used in place of acetic acid we obtain salicylanilid, benzoic acid will make benzanilid, gallic acid gallanilid, formic acid, formanilid, and so one If bromin be substituted for one H in the para CH group, we obtain synthetic asepsin, with iodin, iodacetanilid, if the CH_3 group be substituted for H in the NH group, exalgin is obtained

The manufacture of phenacetin is a little more expensive, but not very much more difficult than the manufacture of acetanilid Starting with phenol or carbolic acid and treating with HNO_3, we obtain paranitrophenol The sodium salt can easily be made by adding to it NaOH and by heating this with C_2H_5I, paranitrophenetol is obtained. By reduction again with Fe and HCl, as in the manufacture of acetanilid, the NO_2 group, is reduced to the NH_2 group, and we have paraphenetidin On boiling this with glacial acetic acid, the substitution takes place in exactly the same manner as in the formation of acetanilid. It may be regarded as acetanilid, in which the OC_2H_5 group replaces one H atom It would be known then also as ethoxyacetanilid or as acetphenetidin By developing these two antipyretics, although it may seem somewhat complex, one is able to appreciate the relationship existing between them and explain that the superiority of phenacetin is due to the entrance in the acetanilid molecule of the ethoxy group

1 $C_6H_5OH+HNO_3=C_6H_4NO_2OH+H_2O$
Paranitrophenol

2 $C_6H_4NO_2OH+NaOH=C_6H_4NO_2ONa+H_2O$

3 $C_6H_4NO_2ONa+IC_2H\ =C_6H_4NO\ OC_2H\ +NaI$
Paranitrophenetol

4 $C_6H_4NO_2OC_2H_5+Fe+6HCl=C_6H_4NH_2OC_2H_5+Fe_2Cl_6+2H\ O$
Paraphenetidin

5 $C_6H_4NHH\ OC_2H_5+HOOC\ CH_3=C_6H_4\ NH\ OC\ CH_3\ OC_2H\ +H\ O$
Acetic Acid Phenacetin

Here, too, there are a large number of derivatives possible by introducing other acid radicles than acetic. Lactic acid gives lactophenin, salicylic acid produces saliphen, citric acid, citrophen, propionic acid, triphenin, mandelic acid, amygdophenin The physiologic action of all of these compounds and a number of other derivatives of phenetidin are fundamentally the same

The antipyretics just spoken of are coal tar derivatives or synthetics, but of a list of over thirty synthetics which I found on the shelves of an Ann Arbor pharmacist more than half were not derived from coal tar products In this list the following were from coal tar antipyrin, acetanilid, phenacetin, exalgin, lactophenin, nosophen, orthoform salophen, agurin, xeroform, saccharin, salol, methylene blue, phenolphthalein Those derived from other sources were iodoform, chloral hydrate, chloralamid, heroin, protargol, argyrol, sulphonal, trional, urotropin, betaeucain, euquinin, tannigen, tannalbin aristol, duotal, thiosinamin, veronal, urethan

Kopp's Baby's Friend Still at Its Deadly Work.

The newspapers of Duluth, Minn, recently chronicled the death of a child from what one paper characterized as "patent dope" We communicated with Dr A J Braden of Duluth the attending physician in the case, and he sends us the following report

History—On Sept 7 1906 I was called to attend a six months old child The child was vigorous and healthy when born and had always been breast fed When it was about two weeks old it was troubled with colic and on the advice of a neighbor the mother administered a preparation known as Kopp's Baby's Friend This was at first given in doses of from 5 to 8 drops and was gradually increased until at the time of my visit the child was receiving a teaspoonful at a dose The mother informed me that she always gave at least one such dose daily and that some days she gave two She would not admit that she ever gave more than two doses in one day, but I am convinced from my conversation with her that the child received the two doses more days than it did the one

Examination—When I saw the child the pupils were pin point in size and it had the appearance of being deeply narcotized The child was pale and waxy in color and the body was emaciated, in fact, the infant appeared to be in the last stages of marasmus

Remarks—The child died September 8 As this child was healthy at birth, was breast fed, never had diarrhea or other sickness, I believe that its death was due to chronic opium poisoning, and I so reported it in the death certificate

I may state that within a few days after a birth is reported in Duluth, a sample bottle of Kopp's Baby's Friend finds its way to the parents, and I know of two instances in which the preparation was introduced in this way and in which it was being used daily several months afterward

Proprietary Prostitution

Under this head, the *California State Journal of Medicine* says

"Some time ago The Journal of the American Medical Association published a statement to the effect that most proprietaries, no matter how exclusively they may have been presented to the medical profession at first, eventually become 'patent medicines,' in the sense that they are later advertised directly to the public and encourage self medication A very forcible example of just that very progress from the doctor and the medical journal to the general public and the lay publication has been furnished recently Some few years ago Mr Alpers, one of the leading pharmacists of New York, became interested in guaiacol preparations and derivatives and produced a substance which he called 'triacol (Alpers)' It was presented to the medical profession, and, we believe, found to have some merit Doubtless it was sent around and a number of physicians 'sampled' Doubtless, too, a number of hospitals received supplies of it and used it. It was advertised in some of the larger medical journals and was, apparently, a perfectly ethical preparation But now comes the sequel Having developed a certain market in the medical profession, and having secured a certain quasi medical endorsement, the scheming proprietors, the Alpers Chemical Co, throw off the mantle of decency and come before the public In the last issue of one of the lay magazines (*Ainslee's*) appears the following advertisement

> Physicians prescribe Triacol (Alpers) Triacol (Alpers) has been accepted by physicians as the most perfect combination of certain approved remedial agents for the treatment and cure of diseases of the organs of respiration Coughs bronchitis bronchial asthma and other diseases of the respiratory organs promptly yield to the action of this scientific preparation Triacol (Alpers) is not a patent medicine It is a strictly ethical preparation extensively and successfully used in hospitals and in private medical practice Interesting booklet sent on request, telling what triacol (Alpers) has done and is doing to cure coughs bronchitis etc Thousands of physicians approve triacol and praise it At all department stores and druggists Price $1 express prepaid

'Now, is not that nice? And Mr Alpers stood for years as a leader in scientific pharmacy and his voice was listened to with respect in the deliberations of the American Pharmaceutical Association Is it to laugh or to weep?"

Silver Preparations in Conjunctival Disease

Myles Standish (*Ophthalmic Record*, August 1906) remarks that while a positive result from laboratory tests is of value, negative laboratory results form a very poor foundation for clinical advance He refers to the recent experiments of Dr Derby, which are supposed to show the inefficiency of silver preparations and which illustrate the difficulties of trying to reproduce clinical *conditions in the laboratory On account* of the difficulty with which the gonococcus is cultivated the experiments were made with the *Staphylococcus aureus* Clinical experience, however seems to show that the bactericidal [illegible] of silver is much greater in cases of gonococcic infection [illegible] in that of staphylococcic It is highly probable [illegible] condition which is omitted in the laboratory [illegible] the growth of the gonococcus on ordinary may be the very one which makes silver efficacious in the treatment of the disease

The reason that ordinary clinical observation is of small scientific value is that it is impossible to control all the conditions and to keep the patient under constant supervision. Standish believes that these objections are obviated in such an isolation ward as the Gardner Building of the Massachusetts Charitable Eye and Ear Infirmary Here the conditions surrounding the patient, he states, are absolutely under control The cases selected for observation were cases of gonorrheal ophthalmia with clear cornea Of 50 cases of ophthalmia neonatorum treated with silver nitrate corneal affection developed in 6 per cent In 150 cases treated with protargol the cornea became infected in 3 per cent In 201 cases treated with argyrol, the cornea became infected in 2 per cent In adults the proportion of cases in which the cornea became infected was much greater, being about 42 per cent, but in only approximately 7 5 per cent. was the outcome a blind eye

Standish's conclusions are that "the modern silver preparations are efficient in the control of gonorrheal infection of the conjunctiva, and that they have greater bactericidal properties in this disease than the laboratory experiments on other micro organisms would lead us to expect"

Standardization of Non-official Remedies

In the treatment of digestive disorders, due to an insufficient secretion of saliva, the administration of the starch digesting ferment, diastase is often recommended Besides those malt extracts, which contain active diastase, various forms or brands of diastase are offered for sale The source of these products differs widely and we have diastase obtained from malt, diastase extracted from the pancreas of animals and diastase of fungoid origin

Diastase is not official in the United States Pharmacopeia and no standard of quality has been established for it. It is, therefore, but natural that the different brands as found on the market will differ very much in strength

That this is true is shown by W H Blome, University of Michigan (*Pharm Rev*, 1906, p 260), who examined four commercial brands and found two of them practically worthless

This examination brings out another important point, namely, that the activity of these preparations varies decidedly with the conditions of the experiments Thus, a certain brand was capable of changing a much larger quantity of starch to *dextrin* than was another brand, but when these two brands were judged according to the amount of starch converted to *sugar* then no great difference in activity was shown

This difference in action is not surprising when the widely different sources of the ferment is considered, it points out the need of the adoption of some standard method for the valuation of diastase preparations As far as possible, such a method should indicate their value as an aid to digestion.

"Patent Medicines" and Artificial Foods in Australia.

According to the *Pharmaceutical Journal*, Sept. 15, 1906, the Federal House of Representatives of Australia has passed the following motion

> 1. In the opinion of this house in the interest of the health of the community of Australia, it is desirable that all patent or proprietary medicines all infantile and artificial foods, all medical and surgical appliances which purport to cure or to alleviate any disease to which the human frame is subject, should be critically examined on entry into the commonwealth (a) To ascertain their contents and composition (b) To ascertain their value from a curative standpoint. (c) To ascertain their value as food. (d) To ascertain their value as remedial agents.
>
> 2. It is further desirable that the exact pharmaceutical composition or construction should be set out clearly on the label or package of each bottle tin box or parcel and that a clear definition be given of the ailment they profess to cure or alleviate.
>
> 3 In the event of the description on the bottle tin box, package or parcel being false or misleading to the purchaser then all such articles shall be refused admission into the commonwealth and all such as have been landed and not cleared shall be destroyed.

The government already possesses authority to enforce these regulations, and Sir William Lyne, minister of customs expressed a determination to stop the importation of undesirable goods

Correspondence

Pathologists in Hospitals for the Insane

St Peter, Minn, Oct 22, 1906

To the Editor —Laboratories in hospitals for the insane in the Middle West are not so uncommon as the editorial in The Journal, October 6, would imply There are a number of them, and the laboratory in this hospital has been in existence since 1894 This laboratory was started as an adjunct to the clinical work of the hospital, rather than as a place to study the morbid histology of the brain, although the latter has not been neglected, and the "continued careful study of the rich material in these institutions" has shown us that they are unworked mines of clinical and pathologic wealth in general medicine, which have been overlooked and ignored, while time and attention has been given to the study of the morphology of the brain, and the histology of its cortex, as if in them was constituted the pathology of insanity, and with the implication that the brain existed and performed its functions independently of the rest of the organism

Your readers may be surprised to hear that the opportunities for clinical and laboratory study in general medicine, are as great, and in some respects much greater than those existing in the average general hospital, and the knowledge to be gained of the processes in disease is much greater, because there are so many patients, and they live in the hospital continuously While, because of the hospital régime, the ordering of the diet and occupation of the patient, and the control of his conduct, everything else but the condition to be studied can be eliminated, and this is particularly true in the study of the chronic degenerative processes in the vegetative organs Furthermore, the work done in the laboratory has shown us that the true pathology of insanity is somatic, and has to do with the processes of nutrition and waste as they are affected by acute disease or degenerative change in the body organs

If medical men generally would interest themselves in the clinical work in hospitals for the insane, and encourage bright young men to seek experience in general medicine in them, much would be done to put the study of insanity on a truly scientific basis, to separate psychiatry from metaphysics, and to eliminate the superstition and preconceived ideas concerning the insane that so seriously hamper the work of these institutions.

It is to be hoped, therefore, that the medical profession in Illinois will encourage other work in the laboratories to be established, besides the study of the morbid histology of the brain and general nervous system, and the manifestations of morbid psychology, which are, after all, results, not causes

H A Tomlinson

Warning Against Fraudulent Insurance Agent.

Fargo, N D, Oct. 6, 1906

To the Editor —There is a man traveling about the country representing himself as an agent of the Columbian Life Insurance Company of Boston He goes by the name of Bailey and other aliases, he sells stock and appoints agents The officials of the company inform me that he has swindled a great many doctors and that they have had detectives on his trail, but have not been able to get him He is a large man, weight 240 pounds, about 5 feet 11 inches tall, dimple in chin, gray or blue eyes, poses as a Mason and an Elk I believe publicity in The Journal and request for other journals to copy might save a good many doctors money and might be means of apprehending this criminal

P H Burton, M D

[This case was the subject of a warning in The Journal, May 12, 1906, page 1403]

The Necessity for Better Provision for Legal Medicine

Philadelphia, Oct 13, 1906

To the Editor —May I trespass on your space so far as to plead not guilty, or at least, *non vult*, to the indictments by some of your correspondents in The Journal, October 13 page 1208 I do not think I was sarcastic, I did not intend to be I objected to regarding lectures by a lawyer as sufficient to constitute a course in medical jurisprudence for medical students I did not express a doubt, that, as far as they go, the lectures are satisfactory, but they are not likely to go far enough, and it appears that I was not astray in my view of their scope

I am quite willing to second Dr Cattell's encomiums of Coroner Jermon, but this improved condition is not yet a year old, and my statements had reference to the course of events in the coroner's office for nearly a generation It would require too much space to prove it, but I feel sure that a statistical inquiry would show that the creditable features Dr Cattell enumerates are but secondary in the general history of the office in this city Moreover, the reform wave is probably now on its ebb Henry Leffmann

Marriages

Charles C Harrold, M D, to Miss Helen Shaw both of Macon, Ga, October 23

John A Bruce, M D, Boston, to Miss Ada Bromilow Lake of Chicago, October 24

Charles Fisher Osgood M D, to Miss Ella Hubenthal, both of Ogden, Utah, October 10

William A Miller M D, to Mrs Amy Richardson, both of Sheridan, Wyo, recently

Eugene Frederick Warner, M D to Miss Dorothy Alness, both of St Paul, October 9

M A Flatley, M.D, Antigo, Wis, to Miss Eugenie Shea of Ashland, Wis, October 9

L Austin Burr, M D, to Miss Josephine Raney, both of Bloomington, Ill, October 17

Albert C McGeagh M.D, Pittsburg, to Miss Myrtle B Price, at Pittsburg, recently

Arthur M Smith, M.D, Los Angeles, Cal, to Miss Ellen Leona Milligan of Chicago, October 18

Samuel Lloyd McCarthy M D, Altoona, Pa to Miss Marian Miller of Media, Pa., October 6

Edwin M Chauncey M.D, Girard Mich, to Miss Myrtle Campbell, at Girard, Mich, October 10

James Rufus Littleton, M.D, Augusta, Ga, to Miss Mary King Marland of Griffin, Ga, October 2

John J Sullivan, Jr, M.D, Scranton, Pa, to Miss Frances Mary O'Neill of Philadelphia, October 10

Herman John Brackney, M.D, Sheldon Iowa to Miss Carrie May Soesbe of Greene, Iowa, October 17

William H Matchette, M D Hancock, Mich to Miss Mabel Hambitzer of Houghton, Mich, October 10

Ernest Lawrence Parker, M D., Worcester, Mass to Miss Sally Leeds Bufford of Dorchester, Boston, recently

Lewis S Thorpe, M.D, Los Angeles, to Miss Edith Lillien crantz of Oakland, Cal, at her country home near Aptos, October 11

Deaths

James Stewart, M.D McGill University, Medical Department, Montreal, 1869, L R C P and L R C S Edinburgh 1883, from 1883 to 1891 professor of materia medica and therapeutics, and thereafter professor of medicine and clinical medicine in McGill University and surgeon in chief of the Royal Victoria Hospital, a well known specialist on nervous diseases, honorary president of the section of medicine at the Pan American Medical Congress, 1896, and vice president of the St Andrew's Society, Montreal, 1897 died at his home in Montreal, October 6 from cerebral hemorrhage, after an illness of nine days, aged 59

George Douglas, M D New York University New York City, 1845 a member of the New York State Medical Society, Chenango County (N Y) Medical Association an honorary member of the Medical Society of the State of California a member of the International Medical Congresses in 1876, 1887 and 1890, a member of the first Pan American Medical Congress, 1893, and formerly president of the Rocky Mountain Medical Association, one of the oldest practitioners of Chenango County, died at his home in Oxford October 10 from hemorrhage of the bladder, aged 83

Joseph Wylie Maxwell, M.D Kentucky School of Medicine, Louisville, 1859, a veteran of the Civil War, and thereafter a professor in the Kentucky School of Medicine and also in the Louisville College of Medicine, for several terms a member of the board of council, board of aldermen and board of school trustees of Louisville, notable as an inventor and chemist, died suddenly from cerebral hemorrhage, at his home in Louisville, October 12, aged 73

Randell Croft Stoney, M.D Medical College of the State of South Carolina, Charleston, 1897, a member of the American Medical Association, Medical Society of the State of California and San Francisco County Medical Society of San Francisco, contract surgeon United States Army during the Spanish American War, with service in the Philippine Islands, was instantly killed in a street car accident in San Francisco, October 1

George Wollage Pratt, M.D Geneva (N Y) Medical College, 1845, for more than 50 years editor of the Corning *Daily Journal*, postmaster of Corning for one year, for seven years collector of the port of Corning, and for several terms a member of the board of managers of the St Lawrence State Hospital, Ogdensburg, died at his home in Corning, N Y, October 3, after a long illness, aged 85

John F Jenkins, M D University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1866, a member of the American Medical Association and Michigan State Medical Society, once vice president of the Southern Michigan Medical Society, for 34 years an esteemed and successful practitioner of Tecumseh, Mich, was found dead in his office, October 12, from heart disease, aged 72

Adam Uriah Holladay, M.D Memphis Hospital Medical College, Memphis, Tenn, 1900, for two years secretary of the Craighead County (Ark) Medical Society, a member of the Tri State Medical Society and the Tipton County (Tenn) Medical Society, died at his home in Randolph, Tenn, September 20, from malarial hematuria, after an illness of 30 hours, aged 31

Bonner Huxley Cavitt, M.D Barnes Medical College St Louis, 1903, of Hoxie, Ark, a member of the Arkansas State Medical Society and Lawrence County Medical Society, local surgeon for the St Louis, Iron Mountain & Southern Railroad, died in the Missouri Pacific Hospital, St Louis, September 20, from remittent malaria, after an illness of four weeks, aged 26

Max Hempel, M.D Medical Department of Washington University, St. Louis, 1901, a member of the American Medical Association and of the St Louis Medical Society of Missouri, of wide repute as an educator and writer on scientific matters, died at Mullanphy Hospital, St Louis October 9, from carcinoma of the stomach, after a long illness, aged 43

Harvey Donnel Owen, M.D Medical Department of the University of Tennessee, Nashville, 1897, a member of the American Medical Association, the Oklahoma State Medical Association and the Pottawatamie County Medical Society, died at his home in Keokuk Falls Okla., from remittent malarial fever, October 3, after an illness of three weeks

William D Sullivan, M.D McGill University, Medical Department, Montreal, 1879 a member of the American Medical Association, of High Springs, Fla, a surgeon of the Atlantic Coast Line, died in the Odd Fellows' Sanitarium, Gainesville, Fla, four days after an operation, from acute kidney disease, October 5, aged 54

John M Quick, M.D Eclectic Medical Institute, Cincinnati, 1856, auditor of Franklin County until 1860 secretary of the local board of health of Brookville from 1890 to 1894 and physician to the Franklin County Infirmary from 1894 to 1900 the oldest practitioner of Brookville, Ind, died October 13 aged 88

Alfred H Robbins, M.D University of Buffalo, Medical Department, 1850, for more than half a century a practitioner of Rochester, Ind, representative from Fulton County in the state legislature for three terms died at his ho[illegible] n Rochester, October 8 from senile debility, aged 80

Robert L Morrison, M D University of Maryland School of Medicine Baltimore 1896, of Parkersburg W Va [illegible] d at the home of his uncle in New York City October 15 fro[illegible] effects of an abscess at the base of the brain for which op[illegible] tion had been performed, aged 35

John Lee Gordon, M D University of Maryland School of Medicine Baltimore 1845 died at the home of his son in Columbus, Ohio from acute bronchitis, October 8 aged 86

William Harvey Axtell, a practitioner of Mercer County, Pennsylvania, for 65 years, some time coroner of Mercer County, and for 25 years school director, died at his home in Sheakleyville, September 19 from senile debility, after an illness of eight months, aged 90

Francis Volney Cox, M.D, some time secretary of the Ohio Valley Medical and Surgical Society and of the Surgical Society of Ohio died at his home in New Martinsville, W Va, September 27, from cancer of the rectum, after an illness of four years, aged 55

William E Todd, M.D Bellevue Hospital Medical College, New York City, 1878, a prominent physician of Jackson, Miss, and for many years city physician of Jackson, died at his home in Jackson, October 13, after an illness of several days, aged 49

Merrill Gaylord Pingree, M.D Bennett College of Eclectic Medicine and Surgery, Chicago, 1880, who had been ill for a number of years, is reported to have committed suicide, October 15 by gunshot wound of the head and gas asphyxiation, aged 60

Theodora E Vassault, M.D Medical Department of the University of California, San Francisco, 1900, of San Francisco, died in the San Francisco Hospital for Women and Children, from cerebral hemorrhage, August 20

J R. Jones, M.D Missouri Medical College, St Louis, 1859, one of the earliest settlers of Neosho County, Kansas, died at his home near Chanute, from heart disease, after an illness of several years, October 13, aged 70

Dennis Henry Carr, M.D Tufts Medical School, Boston, 1906, of Dorchester, Boston, house surgeon at St Vincent's Hospital, Worcester, died suddenly in that institution, October 4, from uremia, aged 30

Cicero Berlin, M.D Medical College of Ohio, 1863, president of the Auglaize County Medical Society, the oldest practitioner of the county, died at his home in Wapakoneta, Ohio, October 12, aged 79

Edwin W Eldridge, M.D Cincinnati College of Medicine and Surgery, 1879, formerly coroner of Wabaunsee County, Kansas, and a practitioner of Kansas City, Kan, died October 7, in Alamogordo, N M

Eugene Van Ness, M.D Pennsylvania Medical College, Philadelphia, 1861, a chemist of New York City, died in his laboratory from the effects of hydrocyanic acid, self administered, October 12, aged 60

James William Savage, M.D New York Homeopathic Medical College and Hospital, 1861, died at his home in Bath, Maine, September 18, from diabetes, after an illness of 15 years, aged 76

Zenas Carey, M.D Physio Medical Institute, Cincinnati, 1867, some time a lecturer in the college from which he graduated, died suddenly at his home in Bangor, Iowa, October 9, aged 73

Pietro Eganga, M.D University of Palermo, Sicily, 1898, formerly surgeon in the Italian army, was found dead at his home in Providence, R I, from heart disease, October 10, aged 36

Charles E Oatis, Jr, M.D College of Physicians and Surgeons, Baltimore, 1879 died at his home in Hazelhurst, Miss, October 8, from nephritis, after a long illness, aged 49

Anthony J Weitenberger, M.D Detroit (Mich) College of Medicine, 1899, died at his home in Detroit, from pneumonia, October 8, after an illness of three weeks, aged 27

Guido Katzenmayer, M.D Bellevue Hospital Medical College, New York City, 1883 died at his home in New York City, October 13, after an illness of five weeks, aged 74

James D Sharp, M.D Louisville Medical College, 1892 of Baconton Ga died at the home of his parents in Fort Gaines, Ga, October 3, after an illness of six months

David J Erwin, M D Fort Wayne (Ind.) College of Medicine, 1884, died suddenly at his home in Lake City, Mich, October 11, from heart disease

Henry A. Laurent, M.D University of Heidelberg Germany 891, died at his home in New York City, October 12, from phritis, aged 43

Jacob F Hifsh, M.D Baltimore died at La Misa, Cal September 12, from disease of the throat after an illness of three months aged 26

Franklin W Courtney, M D Cincinnati College of Medicine and Surgery, 1876, died at his home in Carencro, La, October 6, aged 54

Peter C Meengs, M D Rush Medical College, Chicago, 1891, died at his home in Ukiah, Ore, from pneumonia, recently

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers U S Army week ending October 20 1906

Eastman William R. asst. surgeon returned to Army General Hospital Presidio of San Francisco from leave of absence

Buck Carroll D, asst. surg reported at San Francisco for duty at the Army General Hospital

Maus Louis M deputy surgeon general, granted hunting leave for ten days.

Pinkston Omar D asst. surgeon, reported for duty as surgeon of the transport *Sherman*

Heysinger James D, asst. surgeon, granted leave of absence for fourteen days

Stedman, Chester J, asst. surgeon granted leave of absence for one month

Rhoads Thomas L. asst. surgeon left Fort Riley Kans., for his station West Point N Y

Skinner George A asst.-surgeon arrived at Fort Snelling Minn. per telegraphic instructions Headquarters, Department of Dakota

Jones, Harold W asst. surgeon arrived at Presidio of Monterey Cal from duty in Sequoia National Park.

Lewis William F asst. surgeon relieved from duty as attending surgeon at Chicago and ordered to Fort Snelling Minn for duty

Chidester Walter C asst. surgeon granted leave of absence until Jan. 15 1907 resignation accepted to take effect that date

Lyster William J L., asst surgeon, left Fort McIntosh Texas on leave of absence for two months twenty four days

Richardson George H contract surgeon ordered from Presidio of Monterey Cal to duty at the Depot of Recruits and Casuals Angel Island Cal

Merrick John N contract surgeon granted leave of absence for one month with permission to ask an extension of one month

Chase Alpha M contract surgeon ordered from Fort Clark Texas, to Fort Sam Houston Texas for temporary duty

Treuholtz Clarence A. contract surgeon returned to Army General Hospital Fort Bayard N M. from temporary duty at Fort Wingate, N M.

Marvin Marion F contract surgeon left Fort Mansfield R. I and arrived at Fort H G Wright, N Y for temporary duty

Richardson William H contract surgeon left Fort Monroe, Va. and arrived at Camp of Supply Newport News Va for duty

Repp John J contract surgeon ordered from Philadelphia to the Army General Hospital Washington Barracks D C. for duty

Felts, Robert L. contract surgeon left Fort Sam Houston Texas on leave of absence for three months

Burkart, John L. contract surgeon ordered from Chicago to Fort Sheridan Ill for duty

Dulin Charles T contract surgeon ordered from North Yakima Wash to Whipple Barracks Ariz for duty

Garcia, Leon C contract surgeon ordered from St. Louis to Fort Riley Kan for duty

Jarrett, Arthur R. contract surgeon ordered from Brooklyn to Fort Totten N Y for duty

Tyler George T contract surgeon ordered from Baltimore to Fort Monroe Va for duty

Navy Changes

Changes in the Medical Corps U S Navy for the week ending Oct. 20 1906

Pryor J C surgeon detached duty at the Marine Barracks Washington D C to additional duty at U S Naval Medical School Hospital Washington D C

Field, J G surgeon additional duty at Marine Barracks Washington D C

Derr E Z medical director commissioned a medical director in the United States Navy from Sept 6 1906

Eagling E. pharmacist, U S N, retired died at Yokohama Japan September 22, 1906

Public Health and Marine Hospital Service

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending October 17 1906

Eager J M. assistant surgeon general directed to proceed to Harrisburg Pa. for special temporary duty on completion of which to rejoin his station in Washington D C

Godfrey John surgeon placed on waiting orders effective Oct. 13 1906

Grubbs S B P A. surgeon leave of absence granted by bureau letter of August 30 1906 revoked

Wille C. W P A. surgeon directed to proceed to New Orleans for special temporary duty on completion of which to rejoin his station at Gulf Quarantine

Houghton M W acting asst surgeon leave of absence granted for 15 days from Oct. 15 1906 amended so as to be effective from October 20 1906

Shehan L B acting asst. surgeon granted leave of absence for 17 days from Aug. 21 1906

Shehan L B acting asst. surgeon granted leave of absence for 30 days from July 21 1906 on account of sickness

Walkley W S. acting asst.-surgeon granted leave of absence for 5 days from Oct 15 1906 and excused for a further period of six days without pay from Oct 20 1906

BOARD CONVENED

A board of medical officers was to meet in Baltimore Oct 17 1906 for the purpose of making a physical examination of a cadet of the Revenue Cutter Service, said board to continue in session until Oct. 23 for the purpose of examining other cadets of the Revenue Cutter Service Detail for the board Surgeon L L. Williams, chairman, Asst. Surgeon Friench Simpson recorder

Health Reports

The following cases of smallpox yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine-Hospital Service during the week ended Oct 19 1906

SMALLPOX—UNITED STATES

Georgia Chatham County, Oct. 10 2 cases
Illinois Moline Sept 23 30 2 cases
Indiana South Bend, Sept. 20 Oct. 6 1 case.
Missouri St. Joseph Oct. 2 9 1 case.
Tennessee Knoxville, Sept. 29 Oct 6 1 case
Texas Houston, Sept. 29-Oct. 6 I case (imported)
Wisconsin Appleton, Sept. 29 Oct. 13 8 cases

SMALLPOX—FOREIGN

Africa Cape Town Aug 25 Sept. 1 1 case.

Brazil Bahia, Aug 25-Sept. 15, 9 cases Rio de Janeiro Sept 2 15, 3 cases

Chile Antofagasta Aug 14-Sept. 8 55 cases 15 deaths Coquimbo, Aug 11 31 65 cases 5 deaths Iquique Aug 23-Sept. 8 present

Ecuador Guayaquil Sept 1 15 19 deaths.

Great Britain Bradford, Aug 25-Sept. 18 2 cases

India Bombay Sept. 4-11 1 death, Calcutta Sept. 1-8 1 death Karachi, Aug 26-Sept. 2 4 cases, Madras, Aug 25 Sept. 7 3 deaths Rangoon Aug 18 25 2 deaths.

Italy General Sept. 21 27 3 cases.

Nicaragua Sept. 27 Oct. 4 1 case

Russia Moscow Sept. 8-15 6 cases Odessa Sept 8 22 2 cases St. Petersburg Sept. 1 8 1 case.

Spain Barcelona, Sept. 20 30 11 deaths.

Turkey Constantinople, Sept. 8 16 1 death.

YELLOW FEVER.

Cuba Guines Oct 13, 1 case 1 death, Havana, Oct 10 16 10 cases 1 death Santa Clara Province, Oct. 11 13 2 cases

Ecuador Guayaquil Sept 1 15 2 deaths.

Mexico Merida Sept. 23 29, 4 cases 4 deaths Tustepec 1 case Vera Cruz, 1 death

CHOLERA—INSULAR

Philippine Islands Manila, Aug 18 Sept. 1 58 cases 48 deaths Provinces 639 cases 490 deaths

CHOLERA—FOREIGN

China Fuchau, Aug 10 present.

India Bombay Aug 28-Sept. 18 161 deaths Calcutta Aug 25 Sept. 8 15 deaths, Rangoon Aug 18-Sept 8 11 deaths

PLAGUE.

Australia Sydney July 22 28 1 case.

Brazil Bahia, Aug 25-Sept. 1 1 case 1 death Campos Sept 10, 1 case, Rio de Janeiro Sept 2 15 16 cases 8 deaths

China Fuchau Aug 10 Sept 10, present Hongkong Aug 11 18 3 cases, 2 deaths.

India General, Aug 25-Sept. 1 3 503 cases 2.523 deaths Bombay, Aug 28 Sept 18 82 deaths Calcutta, Aug 25-Sept 8, 19 deaths Karachi Aug 26 Sept. 2 6 cases 4 deaths Rangoon Aug 18-Sept. 8 188 deaths.

Japan Formosa Aug 21 31 1 case 4 deaths

Peru Lima Sept 1 12 4 cases Paita Sept. 1 8 1 case 1 death

Society Proceedings

COMING MEETINGS

Mississippi Valley Medical Association, Hot Springs Ark Nov 7 8
American Public Health Assn Mexico City Dec. 3-7
Southern Surg and Gyn Assn, Baltimore, Dec. 11 13

ST LOUIS MEDICAL SOCIETY

Regular Meeting, held Oct 6, 1906

SYMPOSIUM ON THE INDICATIONS FOR THE INTERRUPTION OF PREGNANCY

Diseases of the Kidneys

Dr Henry Schwarz called attention to the different significance of induced pregnancy according to the period of pregnancy and according to the purpose for which it is undertaken He said we should speak of induced labor when the interruption is attempted near term, and induced abortion and miscarriage when attempted in the early days of pregnancy Premature labor is attempted either in the interest of the mother or of the child If it is attempted in the interest of the fetus one must be sure that the fetus is viable In this case pregnancy must be beyond the thirty second week and the child must show signs of life Under favorable conditions a fetus of twenty four weeks gestation may continue to live, but the majority of children born near the twenty eighth week die. Whenever it is desired to induce premature labor in the interest of the child, the pregnancy must be up to the thirty second week. When it is desired to interrupt pregnancy in the interest of the mother, it is a different matter After the thirty second week it should be remembered that there is a good chance of saving the child by the use of incubators and milk specially prepared There is no satisfaction or glory in the performance of miscarriage for the sake of saving the mother's life By Cesarean section the mother and child can sometimes be saved It is only when two or more reputable physicians are of the opinion that a woman is in danger of dying that there is justification in the performance of a miscarriage No individual physician should attempt to decide it alone

The speaker said that in twenty seven years' practice of special kind (obstetrics), only diseases of the kidneys called for the interruption of pregnancy near term Distinction must be made between kidney diseases that have existed before pregnancy occurred and kidney disorders arising during the term of pregnancy Chronic kidney diseases call for no interruption of pregnancy during pregnancy In cases of chronic nephritis the destruction of kidney tissue is more rapid during pregnancy and in most cases of albuminuric retinitis detachment of the retina and atrophy of the optic nerve have led to blindness While kidney disease of a chronic nature does not call for an interruption of pregnancy, once it has occurred it certainly justifies the physician in warning the patient against pregnancy and teaching her how to prevent conception

As to kidney diseases arising during pregnancy, the fetus is in as much danger as the mother It is then a question of rapidly removing the contents of the uterus to save the mother as well as the child When death approaches a mother the fetus is in great danger of asphyxiation during the agonal stage

Tuberculosis

Dr. L M Warfield said that recognized authorities hold and urge opposite views on this subject The importance of the subject can be seen when a consideration is given to the number of pregnant women who have tuberculosis Bacon claims that 1 per cent. of pregnant women have tuberculosis All authorities agree that when pregnant women have tuberculosis abortion should be attempted during the early stages of pregnancy, as this condition leads to thickening of the vocal cords and eventual death by asphyxia Unless tuberculosis is recognized before the end of the third month, intervention is useless Freund states that in his experience with tuberculous pregnant women, spontaneous abortion is frequent Some claim that 24 per cent of children from tuberculous mothers are born dead

While tuberculosis of the lungs is apt to show during pregnancy, and while it may become worse after delivery still this is not always true Tuberculosis of the lungs, in itself is not an indication for the interruption of pregnancy Freund in 4,000 cases of pregnancy, saw 26 cases of tuberculosis of the lungs All had normal labors and no bad results He saw 21 severe cases, 7 of which aborted Five died after abortion In advanced cases the child should receive the benefit of the doubt, in mild cases the mother

The internist and the obstetrician should work hand in hand on this question The examination of the lungs in pregnant women is of as much importance as the measurement of the pelvis, *in fact, more so* Particular attention should be paid to the convalescence of preg [illegible] omen from colds grippe etc. The diagnosis of malaria should not be accepted in such cases

The speaker advised that no tuberculous mother should nurse her child He concluded by summarizing as follows Tuberculosis of the larynx is the greatest danger in pregnant states In advanced cases of tuberculosis of the lungs in pregnant women there should be no interruption of pregnancy In early tuberculosis of the lungs with loss of weight interruption of pregnancy is perhaps feasible There is only one rule If abortion is to be performed, it should be done early

Diseases of the Heart

Dr W H Vogt said that abortion is indicated when there is absolute danger to the life of the pregnant woman He called attention to the fact that sometimes patients attempt to deceive their physicians by magnifying symptoms so as to make them practice an abortion The question of danger to the pregnant woman from heart disease has been exaggerated The prognosis is usually better than is commonly thought Vignet claims that 13 per cent of pregnant women with cardiac disease suffer during pregnancy, while Poroc claims as as many as 65 per cent Yet many women with cardiac disease go through pregnancy and labor without trouble. In some cases the cardiac disease is overlooked and the patient has her normal labor without any disturbance Among the various heart lesions mitral stenosis is considered to be the most dangerous Lusk claims that beyond the sixth month this complication will prove absolutely fatal Others claim that some patients recover Aortic insufficiency comes next, then mitral insufficiency Jackson reports 13 cases of pregnant women with all the various kinds of cardiac lesions and with all the complications Of these, all but 2 patients went to normal term and labor Of all these patients only one died It has been claimed that spontaneous abortion always occurs in uncompensating lesions of the heart This has been denied The fact seems to be that if a woman has an uncompensating heart lesion she will not go through pregnancy normally, but if the lesion is compensating she will do so

If a pregnant woman is found with a heart lesion she should be controlled carefully She should not be informed of her heart trouble Even if disturbances of compensation occur, the fetus may be carried to full term Patients should be warned not to work, nor to exert themselves climbing stairs Mild exercise may be practiced If symptoms arise indicating disturbance in compensation, put the patient to bed, apply ice bags to the region of the heart, use liquid diet, digitalis and strophanthus If, with all these measures, compensation is not established, then the question of the interruption of pregnancy can be considered The dangerous symptoms are of least gravity during pregnancy, graver during labor and gravest during the puerperium Labor must not be induced too hastily, because after induced labor the sudden drop in blood pressure may kill the patient On the other hand, one should not wait too long Dr Vogt stated that if during the course of pregnancy disturbances of compensation occur that resist amelioration by proper treatment, there is then justification in inducing premature labor It occasionally happens that there is a history of great trouble in these cardiac disease patients in previous pregnancies, in which cases, with consultation, the question of inducing labor should be considered, yet even in such cases care should be taken because it does not always follow that trouble in one pregnancy will be followed by trouble in the next.

As to the question of prohibition of marriage of women who have heart disease, it may be said that if a patient is able to attend to her social duties, is able to be about, marriage should not be prohibited

Hyperemesis

Dr B W Moore said that hyperemesis is more common in France and America than in Germany, and more common in the well to do than among the poorer classes There is a great variation in its frequency and in its gravity Frank says that he has never seen a case of hyperemesis in which abortion is indicated Yet in France 180 cases were collected, with a mortality of 72. For the purpose of the present discussion it was assumed that hyperemesis is fatal unless a therapeutic abortion is practiced This complication may be divided into three classes (1) Reflex or neurotic vomiting (2) toxic (3) uremic Abnormalities of the genital tract have b the cause of reflex vomiting such as ovari rm mole twin pregnancies etc yet l cases The fact that treatment of been followed by relief of the vom to explain the vomiting yet the fact after using irrational drugs offsets this argument It has been said by Kaltenbach that it is a true functional neurosis, a condition comparable to hysteria He claims that it should be treated like hysteria and that therapeutic abortion is never indicated He says that by proper treatment, rest, isolation, quiet, this form should never result fatally It should be borne in mind where pregnancy is unwelcome that this form of vomiting occurs There are cases of vomiting at will practiced to induce the physician to perform an unnecessary abortion

A. Laurent, 1
died at his home
hevritis, aged 43

Jacob F Hifsh, M D B
tember 12, from disease c
months aged 26

As for toxic vomiting, Williams of Johns Hopkins collected postmortem findings in 12 fatal cases in which lesions were found in the liver, resembling those of acute yellow atrophy The origin of the toxic material that produces these lesions has been actively sought Vogt claims that these toxic conditions are related to eclampsia Differentiation from other forms of vomiting is not possible The ordinary chemical examination of the urine may be negative Yet in the terminal stages the skin may become icteric. Death occurs with coma The urine at this stage shows blood, albumin and casts In acute yellow atrophy of the liver the urea is decreased and the ammonia is increased To Williams of Johns Hopkins is due the credit for pointing to an analogous condition of the urine in cases of toxic vomiting These changes in the urine occur before the symptoms actually occur In reflex vomiting, there is not such change in the urine

DISCUSSION

Dr F J Taussig said that it is the duty of the obstetrician to inform the general practitioner when to perform abortion and when not to do so The following rules should be observed The special conditions which call for an interruption of pregnancy should be defined, the pregnancy should be interrupted only when the physician has consulted one or more physicians and their approval has been obtained, the consultant should be some person of note in the community for the dangerous practice of one unscrupulous practitioner calling another unscrupulous practitioner into consultation is not to be overlooked The speaker said that inasmuch as the community and municipality is the loser by the performance of therapeutic abortion, an advisory board of three persons should be appointed to act as a means of protecting the community

Dr B M Hypes called attention to the fact that in all cases of pregnancy the physician's duty requires him to watch and examine his patient from the time he is employed shortly after conception until he delivers the woman He should remember that the pregnant woman is a patient from the time she is impregnated until she has delivered her child and is well He said that he has attended many women with heart disease of long standing and has yet to see a case in which therapeutic abortion was necessary

Dr George Gellhorn said that the authors emphasized the point that while indications for therapeutic abortion exist in many cases apparently, yet induced labor is not often necessary He called attention to another group of indications for the interruption of pregnancy which arise from pathologic conditions within the uterus or genital sphere Tumors must be mentioned in this connection It is now recognized that ovarian tumors call for their removal, but never for the interruption of pregnancy Fibroids rarely interfere with the completion of pregnancy and hardly ever furnish an indication for therapeutic abortion The condition is different with cancer In a case of pregnancy complicated by a cancer differentiation must be made between pregnancy in the first or second half, secondly, between operable and inoperable cancer In cases of pregnancy complicated by cancer, interruption of pregnancy must be proceeded with at once and the growth removed that is in the first half of pregnancy period In the second half of the pregnant period if the cancer is operable the chances for the mother and for the child should be weighed, and in the majority of the cases the woman should be allowed to go to full term and delivery be executed then by a Cesarean section leaving the mother to her fate The same holds true of inoperable cancer Retroflexion of the uterus he said also has a bearing on this question These cases are frequent Yet in the majority of cases the retroflexed uterus will correct its position and rise in the abdominal cavity In other cases the retroflexion will result in spontaneous miscarriage In only the small majority of cases will the pregnant uterus remain in its normal position, in such cases the uterus should be at once replaced. In most cases this replacement is successful, but in those cases of failure there is a most dangerous condition to deal with, one which calls for an urgent indication of therapeutic abortion

CALIFORNIA ACADEMY OF MEDICINE

Regular Meeting, held Sept 26, 1906

Dr G H Evans in the Chair

Action of Amyl Nitrite Inhalations on the Blood Pressures

Dr. A. W Hewlett reported a series of observations on the action of amyl nitrite inhalations on man The systolic and diastolic pressures were determined by the Erlanger instrument The usual action on the systolic pressure in young healthy adults is a primary fall within the first minute of 10 to 15 mm of mercury (exceptionally to 40 mm), and a secondary rise above normal during the second and third minutes of an equal or somewhat greater amount The diastolic pressure falls with the primary fall of systolic pressure and then gradually rises to the normal The pulse pressure, or difference between the two, falls very slightly during the primary fall of systolic pressure and rises very considerably during the secondary rise, sometimes in the latter instance becoming twice the normal pulse pressure for the individual The changes in pulse pressure depend for the most part on the amount of blood expelled from the heart at each systole At the time of the great increase of pulse pressure during the second and third minutes, the excursions of the left ventricle, as seen during an *x* ray screen examination, could be seen to be much greater than before the inhalation The pulse rate was greatly accelerated during the first minute, after which it returned to normal. The total amount of blood expelled from the heart was increased throughout the action of the amyl nitrite, in the early stages on account of the more rapid heart action, and during the later stages on account of the increased amount of blood expelled at each systole In some cases no fall of pressure occurred, only the secondary rise Amyl nitrite, therefore, both dilates the peripheral blood vessels and increases the output from the heart The blood pressure depends on the relation that exists between these two factors Ordinary therapeutic inhalations do not necessarily lower the blood pressure, but they practically always increase the flow of blood A few experiments with large doses of nitroglycerin showed that this drug frequently fails to lower the blood pressure even when it produces marked headache and throbbing in the vessels Possibly in such cases it also dilates the blood vessels and increases the output from the heart

Dr H M Sherman stated that Crile found that nitroglycerin lowers the blood pressure of animals in surgical shock, and that its use is therefore contraindicated in this condition Crile showed that it is very difficult to raise the pressure in a system of elastic tubes by increasing the output from the pump that is supplying these tubes with fluid This fact leads him to question the correctness of Dr Hewlett's explanation of the action of amyl nitrite

Dr W W Kerr stated that the dose of nitroglycerin varied greatly for different individuals The largest amount that he has given without producing trouble was 18 minims of the 1 per cent. solution every four hours These variations may be accounted for by supposing that it dilates the arteries leading to the brain to different degrees in different individuals The circulatory apparatus can not well be compared to a pump on account of the many nervous adjustments that regulate it

Dr Hewlett stated that experiments have shown that the nitrites lower the blood pressure of animals while on man other investigators besides himself have found more of a rise than a fall Possibly the different results of animal experiments are due to differences in the dose employed Therapeutic doses, pushed to their limit, were used in these observations. Possibly toxic doses would have lowered the blood pressure The blood pressure is no indication of the amount of blood delivered by the left ventricle into the aorta, for it may be influenced equally well by changes in the contraction of vessels at the periphery

BRITISH MEDICAL ASSOCIATION

Seventy fourth Annual Meeting, held in Toronto, Ontario, Aug 21 25, 1906

(Concluded from page 1322)

Treatment of Typhoid Fever

F J Smith, M.D, London, condemned the milk diet in typhoid fever and favored the use of solids, provided they have no seeds or other small substances likely to cause trouble. He also favored giving a patient food when he wants it and not when he does not want it, and said he had had good results from these methods In his experience the period of convalescence had been lessened by at least 10 days by this means The hard seeds of fruit, such as lemons, oranges, grapes, figs, etc., should be kept out of the stomach of the patient, or where fruit of this kind is given it should be given in liquid form, strained through a cloth sufficiently fine to prevent any of the seeds or solid matter going through.

Sir Thomas Barlow, M D, London, the president, supported Dr Smith's contention, but believed that care should be taken not to give the patient so much solid food that it would become a mechanical menace to the well being of the patient

The Journal has already referred editorially to this discussion on typhoid

Rheumatism in Children.

Dr. A D Blackader, Montreal, believed that acute rheumatism is an infectious disease, which has no geographical bounds, but presents itself under varied manifestations He compared the characteristics seen in America with those met in England He then considered the frequency of rheumatic arthritis, the importance of muscular pain, the association of tonsillitis with rheumatic infections and its significance, the fibrous nodules and the infrequency of their appearance in America In conclusion he dwelt on the frequency and importance of affections of the heart in childhood, with special reference to rheumatism, and the prophylaxis and general treatment of the condition

Acute Intestinal Diseases of Children

Dr Charles G Kerley, New York City, in his paper, "Prevention of the Acute Intestinal Diseases of Infants During the Summer Time," stated that the most important factor in treating such diseases consists in their prevention, which may be readily brought about by proper feeding methods In improper feeding, which causes intestinal disorder and derangement of digestion, lies the foundation of summer diseases Unclean food he believes to be the root of the evil Faulty feeding methods do their part and an absence of appreciation on the part of physicians and laymen that an attack of acute indigestion in summer is dangerous and needs proper treatment, also plays a part Few cases of intestinal disease are severe at the outset, and if the minor symptoms which are first noticeable are properly treated the result is seldom serious If, however, the disease is allowed to develop, severe and fatal results may be the penalty He advises that with the first sign of gastrointestinal derangement in infants, milk should be discontinued at once, and that nothing but water should be given the baby until the doctor has arrived Frequently, for a day or two after this the diet should be of barley water or rice water as a substitute for milk In large municipalities the solution of the death rate among infants has been the establishment of milk depots where clean, pure wholesome milk may be obtained at cost or even gratis Mothers in tenement houses should be advised by trained nurses in the care of children The author related an experiment made last year in which 50 tenement children were placed under the care of a physician who visited his patient every day and saw that they were fed on safe milk with the result that not one of these infants ranging from three to nine months old, died during the summer period He concurred thoroughly in the advice of Dr Charles A. Hodgetts, Toronto, as regards the advisability of establishing milk depots and the general control of the milk trade by the municipality The farmer should receive a good price if he supplies proper milk, and if his service is satisfactory his remuneration should be commensurate with the service rendered

Forms of Arteriosclerosis

Dr **Oskar Klotz**, Montreal, contributed a paper to the discussion on the forms of arteriosclerosis, their classification and the experimental production. Experimental arterial lesions produced in animals are either degenerative, affecting mainly the media, or regenerative, in which the intima proliferates, when little or no degeneration is seen. The substances used to produce degenerative changes belong to the class of high pressure drugs, but high pressure in itself does not lead to the medial lesions There is a direct degenerative action of the drugs on the muscle fibers of the media and later of elastic fibers, but when the latter once give way aneurismal dilatation follows, the degeneration being of a fatty nature Intimal regeneration is consequent to bacterial toxins, the proliferation being confined to the endothelial layer and the subendothelial cells Where only intimal lesions are present aneurisms are not formed The character of these experimental lesions can be compared to those in man to a certain extent. Here lesions entirely degenerative are met with in the Moenckeberg type of peripheral arteriosclerosis, and with the form of this disease found in the aorta, both of which processes are confined to the media. The experimental bacterial lesions of vessels simulate chronic endarteritis deformans

Cancer

Dr **G H. A. Clowes**, Buffalo, N Y, told of the investigations conducted at the Gratwick Laboratory for Cancer Research, Buffalo As a result of these investigations, it was believed that cancer might be due to some infectious agency Experiments had been made on mice and the disease had been found to be transmitted from one animal to another He detailed the conditions under which mice might be rendered immune While he did not yet feel justified in applying this treatment to human beings, he could not tell to what further research in this direction might lead.

Dr. **E F Bashford** London, England, stated that so far as investigations under the Imperial Cancer Research Fund, of which he is director, indicated, cancer is not increasing in the United Kingdom He held out no hope for the discovery of any cure for the malignant parasite in the near future He believed cancer was the result of old age, that is, that it attacked individuals in the latter third of life and was not infectious

Dr **H. Russell Gaylord**, Buffalo, cited an instance in which certain rats developed cancer after having been kept in a cage in which certain other rats suffering from cancer had been confined, and stated that this was not an isolated instance.

Sleeping Sickness

Dr **Frederick W Mott**, London, England, stated that the sleeping sickness, trypanosomiasis, was spreading along the lines of commercial communication in Africa, that it had reached China and that it now affected white people as well as natives, was generally carried by the bite of a fly from an infected person to a healthy individual, and that no cure had been found for the disease

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KENTUCKY STATE MEDICAL ASSOCIATION

Fifty-sixth Annual Meeting, held at Owensboro, Oct 10 12, 1906

(Continued from page 1308)

Resolutions Adopted

The following resolutions were adopted

PUBLIC POLICY AND ADVERTISING

Resolved That the Committee on Public Policy and Legislation shall also act as the Press Committee with the authority and duty of conferring with a like committee of the State Press Association in regard to advertising and all matters of mutual interest to the medical profession and the public press

INSPECTION OF PUBLIC SCHOOL CHILDREN

Whereas It is a well known fact that the spread of contagious and infectious diseases is largely increased on the opening of public schools many preventable diseases becoming epidemic and being carried by the pupils who are permitted to attend without proper medical examination be it therefore

Resolved That the Committee on Public Policy and Legislation be instructed to have a bill drawn up and presented to the next General Assembly of the State of Kentucky compelling cities of the third and fourth class to appoint a competent medical man as medical inspector of schools

EXPERT TESTIMONY

Whereas, Medical expert testimony as at present developed before a judicial tribunal in Kentucky, is misleading to the jury and unsatisfactory in its results, and we believe the interests of litigants would be best served by having the medical evidence weighed by a jury of experts, therefore be it

Resolved That we urge the legislature of the State of Kentucky at its next regular session to pass a measure which will establish a method by which expert testimony may be embodied in charge of a judge, the purpose being to take the consideration of expert medical testimony out of the hands of the jury

INQUISITION OF LUNACY

Resolved That we condemn the present methods of inquisition of lunacy and believe that the *determination of sanity should* be made by a commission of qualified medical men

PRIVILEGED COMMUNICATIONS

Resolved That we urge on the Kentucky State Medical Association the importance of the act introduced in the last legislature protecting professional communication from patient to physician from forced disclosure on the witness stand and urge every member of the profession to explain the purpose of the act to his local representative in the legislature.

The Insurance Fee Question

The following report of the committee on life insurance examinations (Drs J W Ellis, Masonville, D C Bowen, Elizabethtown, and T J Shoemaker, Morganfield), was unanimously adopted and the secretary was instructed to send a copy to every doctor and newspaper in Kentucky

Your committee on insurance has carefully considered the subject of medical examinations and the reduction of fees, proposed by certain of the old line companies, and submits as its report the following preamble and resolutions

Whereas The recent official investigations of the three great life insurance companies of New York clearly developed that the medical departments were among the few which were not honeycombed with mismanagement or corruption and

Whereas, The legislation resulting from the investigation intended to cure evils existing elsewhere was at once seized on as a justification for a long premeditated, concerted and systematic plan for debauching these departments by lowering the standards and compensation for medical examiners employing and importing into every section recent graduates and men who have failed in practice as well as representatives from the lowest grades in the profession thus destroying what has always been recognized as a fundamental safeguard in sound life insurance and,

Whereas, While nothing could justify such a short sighted course the official reports of the income and expenses of the insurance business in this state and the country at large last year and during all of its history and the facts in regard to the recent legislation in New York make ridiculous the plea that the action was necessary in the interest of economy or was caused by such legislation Now, therefore, be it

Resolved By the Kentucky State Medical Association in annual convention assembled, That this organized and concerted attempt to lower the standard and compensation of medical examiners all over this country is not only most unjust and degrading to our profession but is so unsound as a business proposition that it cannot but ultimately prove most expensive and dangerous to all policyholders in these companies made up of our patrons and ourselves

Resolved That a large experience having demonstrated that the thorough and painstaking examination of every applicant for insurance can not be made for less than five dollars, we recommend that this amount be fixed as the minimum fee, and shall be morally binding on all members in this state on and after January 1 1907

Resolved That in view of the vast interests involved we urge the profession in every county in this state to meet at the earliest practicable day and arrange for organized resistance to this organized and inexcusable oppression We advise that this be done outside of the society and that so far as possible, it include every reputable physician in the county whether a member of the society or not We advise that the agreement be not made a test of membership *our reliance being on the justice of our cause,* a *spirit* of mutual helpfulness and coöperation and our evident duty to protect the best interests of policyholders

Resolved That we pledge our cordial support to those companies which have so managed their affairs that they have never been tainted with charges of corruption and consequently have not found it necessary to degrade their medical subordinates or otherwise destroy the protection of policyholders, and our secretary is hereby instructed to publish a list of such companies in each issue of the journal on condition that they are approved by our active and fearless state commissioner of insurance

Resolved That we also pledge our support to the International Policy Holders Association in every effort it may make for the protection of the interests of policyholders that our secretary is hereby instructed to furnish each county society in Kentucky with an ample supply of ballots for the tickets supported by this association for trustees of each of such companies and that we appeal to the profession in each county and state in the United States to coöperate with us in this movement.

Resolutions were adopted pledging the members of the Association not to make any insurance examinations for less than $5 00 The following resolution was also adopted

Resolved That this association representing the medical profession in every county in Kentucky pledges its cordial and continuous support to Hon Henry W Prewitt state commissioner of insurance in the manly active and systematic warfare he is making to protect the interest of policy holders against a great, far reaching danger and we urge the profession in every county to co-operate with him in this work in every possible way

Increased County Representation.

Chapter IV, Section 2, was amended to read as follows

Each component county society shall be entitled to send to the House of Delegates each year one delegate for every 25 members or major fraction thereof, but each component society which has made its annual report and paid its assessment as provided in the constitution and by laws, shall be entitled to one delegate.

The Kentucky Profession.

Dr C Z Aud, Cecilia, in the president's address, spoke of his visits throughout the state in the interest of the association and dwelt with special pride on the class of men he found practicing medicine in the mountains of Kentucky He declared in favor of patronizing local medical schools, but that it would be better to have fewer and higher grade schools He emphasized the injustice of life insurance companies trying to cut down fees in cases of medical examination, and urged the physicians to stand firm for just fees because the companies depend almost solely on the physician to protect their interests and they should not be miserly in paying for such protection

Technic of the Diagnostician.

Dr **Wm A. Jenkins**, Louisville, delivered the Oration in Medicine He stated that a man to be a good physician should be an expert diagnostician He should have a perfected technic, a good constitution and accurate powers of observation. He must know anatomy and physiology He must be thorough, exact and exhaustive To his book knowledge there should be added common sense It is important always to do the same thing in the same way so that a mistake is impossible

Drainage.

Dr. **W O Bullock**, Lexington, delivered the Oration in Surgery He said that drainage is indicated in suppurative conditions wherever they may be reached, after extensive operations in clean cases to relieve pressure within the chest and abdomen, in operations on the thyroid gland and in certain diseases that can not be extirpated satisfactorily The disadvantages of drainage, especially abdominal, were said to be increased discomfort, prolonged convalescence, liability to hernia, liability to obstruction from pressure or adhesions, danger of reinfection through the drain and the limited efficiency of the drain Modern surgery, he said, is striving to minimize the necessity of drainage

Early Diagnosis and Treatment of Pulmonary Tuberculosis

Dr. **W F Boggess**, Louisville, thought that the difficulty of making an early diagnosis of pulmonary tuberculosis is often overestimated, and that in the south the early symptoms of the disease are often confused with malaria and treated accordingly He urged making it a routine practice to examine the lungs of anemic girls who complain of having stomach trouble Environment, not heredity, often assists in making a diagnosis He insisted on the necessity of getting absolute control and the coöperation of the patient in order to treat him successfully He endorsed the value of sanatorium treatment in the case of those individuals who can afford it, but expressed the belief that the climate of Kentucky is just as suited for the treatment of pulmonary tuberculosis as is any other climate, a statement to which those who discussed this paper did not agree. At home there should be plenty of fresh air, day and night, and food rich in albuminoids should be given, especially milk and eggs Drugs he said should be avoided as much as possible except to meet specific indications

Tuberculosis of Peritoneum.

Dr **Lewis S McMurtry** Louisville, reviewed the clinical history of this affection, and stated that it is fully twice as common in women as in men, the infection in women probably making its way into the peritoneum through the Fallopian tubes He reported a case which illustrated the difficulty of diagnosis, the symptoms simulating those of an inflammatory affection of the pelvis and of dermoid cyst of the ovary The patient died six months after the operation with pulmonary involvement. There had not been any fluid in this case, only a matting together of the intestines with the formation of extensive adhesions In another case there was a considerable effusion, the case presenting all the physical signs of an ovarian cyst. Opening the abdomen and evacuating the fluid resulted in a permanent cure He said that in general tuberculosis of the peritoneum the operation should not be performed, except to treat complications, such as obstruction of the intestine In the ulcerative form of the disease operation always is contraindicated

Dr **Joseph Walsh**, Philadelphia, called attention to the fact that in postmortem examinations he has often found the appendix to be the seat of tuberculosis, and he expressed the belief that the appendix may be the starting point of a tuberculosis of the peritoneum, an opinion in which Dr McMurtry concurred

Gonorrhea Up to Date.

Dr. **J T Windell**, Louisville, stated that nitrate of silver, used carefully, is the ideal agent in the treatment of all cases of gonorrhea, and that the hydrostatic irrigation method of Janet has no equal

DISCUSSION

Dr. **W W Anderson**, Newport, protested against the term gonorrheal rheumatism used by the author, and stated that it should be referred to as being a gonorrheal arthritis because it is not rheumatism He also urged that steps be taken to teach the laity of the seriousness of an attack of gonorrhea and to educate them not to resort to "patent medicines" and proprietaries under the mistaken impression that they can cure themselves.

Dr. **William Bailey**, Louisville, thought that a higher estimate of mortality would do much to prevent gonorrhea, and that the law ought to impose a penalty on any man who spreads this disease Physicians, he said, should impress on the laity that this is one of the worst infectious diseases known to medicine and not a mere cold or something that can be cured in a few days or even a few weeks

Dr **R B Gilbert**, Louisville, called attention to the prevalence of gonorrheal ophthalmia It is his routine practice to have the woman take strong antiseptic vaginal douches twice daily before labor so as to keep the genital tract as clean as possible He said what is believed to be an ordinary leucorrhea is often really a gonorrhea, and no chances should be taken in these cases

Dr **J W O'Connor**, Louisville said that all laws looking toward the stamping out of gonorrhea by restriction are worthless Good results can be obtained only by educating the laity by means of public lectures and pamphlets, as is done in Germany

Dr. **J M Ray**, Louisville, urged the profession to do all in its power to aid in the passage of suitable laws to stamp out gonorrhea inasmuch as 33 1/3 per cent of blind children in public institutions are blind because of an attack of gonorrheal ophthalmia He said that given a case of gonorrheal ophthalmia in a full grown nine months baby, with proper treatment the change for recovery is very favorable, but in the case of a prematurely born baby he has never seen one recover from the disease

Dr. **J G Carpenter**, Stanford, urged that the subject of gonorrhea ought to be quarantined until he has recovered completely At the wind up he should be sounded and he should not be dismissed as cured until his urethra is of normal caliber He should not be permitted to marry until a year afterward He suggested that every man who has gonorrhea be branded in some way such as wearing a red emblem, remarking that then the disease soon would be stamped out.

Dr. **J M Mathews** Louisville urged [illegible] the laity in everything pertaining to gono[illegible] them the conditions that are caused that are wrecked He urged that the ministers talk about it to their congregations, that the press write about it, physicians should talk and write about it He suggested that the governor of every state appoint a commission of five physicians, one of them to be a genitourinary specialist, whose duty it shall be to examine every man who wishes to marry and to issue a certificate permitting such marriage if he is in good health and free from gonorrhea.

Surgical Treatment of Bladder and Urethra.

Dr. Arch Dixon, Henderson, considered lithotrity the best procedure in cases of stone in the bladder of the female The vesicovaginal incision for large stones, he thinks, has nothing to recommend it He urged the necessity of early operation in every case of traumatic rupture of the urethra, not excepting even those cases in which catheterization is possible and in which the rupture is only interstitial An early resort to external urethrotomy will greatly hasten the number of cases of contracted urethras or so called traumatic strictures

Using Elasticity of Lung Tissue in Treatment of Injuries of Thorax and Its Contents.

Dr E W Ford, Hartford, reported the case of a man who had been shot through the lung, an abscess developing later Thinking that the pus was in the pleural cavity, Dr Ford proceeded to drain, but without achieving the desired result He put in a rubber tube, which served as an inlet for air The following day the symptoms had abated in severity and pus was flowing freely from the mouth of the patient, but none from the sinus, the air pressure on the inside of the lung being equalized by that on the pleural surface, so that the pus was forced through the trachea barely allowing room for respiration in the right lung

Cystoscopy and Ureteral Catheterization.

Dr Carl Lewis Wheeler, Lexington, reviewed the history of the invention of the cystoscope and the technic of its employment, and showed that the ureteral catheter is valuable not only as a means of diagnosis but also for the treatment of urethritis and pyelitis, for dilating the ureter in cases of stricture, for injecting oil to facilitate the passage of a stone, and to promote the healing of a ureteral fistula By the aid of the cystoscope, he said, it is possible to ascertain the true condition of the bladder and to get the separate urine from each ureter, and of performing lavage of the renal pelvis, which is the only effective treatment of uretero pyelitis, barring the catarrhal type, and of beginning nephritis due to extension of inflammation from the renal pelvis

Adynamic Ileus

Dr Fred L Koontz, Louisville, suggested that inasmuch as the words dynamic and ileus are opposed in meaning it would be better to adopt the term adynamic, reserving the term dynamic for spasm of the intestinal muscle He said that the treatment, to be of any avail, must be resorted to early Enterostomy should be done only when the ileus is due to mechanical causes and when the condition of the patient will not permit of the adoption of other measures While this procedure will save life, he does not recommend it to the exclusion of other measures

Surgery of Pancreas.

Dr. John R Wathen, Louisville, is of the opinion that the disease of the pancreas is far more frequent than is generally supposed He agrees with M. H Richardson that surgery of the pancreas is encouraging, even in the most progressive lesions, and that it is a field which encourages abundant research As the result of careful examination made on the cadaver, he found that the anatomy of the pancreas, as usually taught, is incorrect

Primary Sarcoma of Spleen.

Dr G A Hendon, Louisville, said that only 35 cases of primary sarcoma of the spleen have been recorded since 1850 The tumor is always circumscribed and does not disseminate until very late in the course of the disease The prognosis at the operation is always good, even in its late stages All the abdominal fistula may be involved in malignant disease, except the spleen, which is the last of the abdominal fistula to become involved in the malignant process Of 18 patients operated on, 13 made a good recovery, only 3 had a recurrence, 4 died from extensive metastasis, rendering the operation purely exploratory, therefore, only one death can be charged to the operation. Dr Hendon reported one case and exhibited the specimen The patient is in good health

Cysts of Pancreas

Dr. T S Lewis, Lexington, reported a case which emphasizes the danger of pancreatic disease following neglected cases of cholelithiasis The patient, a woman, aged 44, suffered from stomach trouble for five years She had bilious attacks every two or three months, lasting from three to four days to a week Several stones were passed and operation was advised. On opening the abdomen a large fluctuating tumor presented, pushing the transverse colon downward and forward and the stomach to the left It proved to be a cyst of the pancreas containing about three quarts of a thin watery fluid of a yellowish green color The sac was washed out thoroughly with normal saline solution and was stitched to the edges of the wound Convalescence was uneventful, except for the abnormous quantities of fluid that came from the sac, and the digested, moth eaten appearance of the abdominal wall around the mouth of the fistula The patient made a good recovery

Cholelithiasis Treated by Olive Oil.

Dr R Alexander Bate, Louisville, presented evidence to show that olive oil does dissolve fresh cholesterin calculi and that all conditions characterized by an excess of organic acids are accompanied by gallstones, and that, in nearly every instance, cholelithiasis is amenable to medical teaching Only the bilirubin calcium calculi appear unchanged in the evacuations of those receiving olive oil internally Surgery, Dr Bate said, supplies the mechanical effect impossible to medicine, and has undoubtedly saved lives where exhaustion would have taken place before solution of the calculi could occur Of 14 patients observed by the author, all of which had had some medical treatment, three were operated on and died In two instances a recurrence took place Nine patients had been apparently cured by the medicinal treatment

Tuberculosis

Dr Joseph Walsh, Philadelphia, stated that a person in good health is practically immune from tuberculosis A run down condition of health, due to overwork or dissipation, however, will create a susceptibility Despite the popular belief to the contrary, he emphasized the fact that tuberculosis is not hereditary He does not believe that the tendency to the disease even is inherited, though on this point there is still some difference of opinion Observation of cases where the disease has appeared in families would rather lead to the belief, however, that the children of a tubercular parent are less susceptible than others It has been shown that the children of tubercular parents rarely die of the complaint under fifteen years of age, in spite of the fact that they have been exposed to the contagion by the closest contact from infancy Tuberculosis is communicated from the parent to the child, as measles or scarlet fever might be, but it is not inherited

Europe, he said, is still in advance of the United States in its provision for the treatment of tuberculosis England, France and Germany have many more sanatoria than there is in this country, but Walsh believes that better work is being done in those that we have Climatic conditions are not essential factors in the cure of consumption In the cure of tuberculosis, therefore, the only things necessary are rest, fresh air and good nourishment under proper direction The best place to get proper direction or discipline is in a sanatorium The purpose of the sanatorium is three fold (1) The cure of the patient, (2) The education of the patient and his friends in the way of prevention, in order to avoid further contagion, (3) The prevention of further contagion on the part of the patient for the time he is in the sanatorium Early cases of tuberculosis with the ambition to get well and the patience to carry out a protracted course of treatment, can be cured in their own homes It is, however, many times easier for the patient to carry out the necessary régime in a sanatorium

Are sanatoria advisable? Dr Walsh said it is only necessary to look over the world and see the opinions of both lay and medical men who have studied the subject On the continent of Europe, that is, omitting England, the sanatoria are supported principally by insurance companies In Germany, every employed individual, whether male or female, must be insured not only against death, but also against disability produced either by accident or disease The insurance companies found that by building sanatoria they could not only cure a certain number of cases of tuberculosis, but they could prevent the disease in a sufficiently large number of others to make it worth the while

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COLORADO STATE MEDICAL SOCIETY

Thirty sixth Annual Meeting, held at Denver, Oct 9 11 1906

(Continued from page 1321)

Hemorrhagic and Gangrenous Pancreatitis

Dr O P Johnson, Boulder, reported four cases of hemorrhagic pancreatitis in which the common bile duct and pancreatic ducts had separate openings Dr Johnston also reported a typical case of Hodgkin's disease, and exhibited the patient

DISCUSSION

Dr William N Beggs, Denver, referred to the importance of distinguishing between two conditions, one classified by Mayo Robson as the ultra acute form, which is to be regarded as the primary hemorrhagic condition, with the inflammatory phenomena added as a result, and the acute form, which is to be regarded as an acute parenchymatous pancreatitis with the hemorrhagic condition superadded He believes that the acute parenchymatous form of pancreatitis is in nearly all instances toxic, the acting toxin being variable Little is known about the means of diagnosing the fulminating form of the disease

As to the cause of death, the view has been advanced that pressure, stretching or mechanical injury to the celiac plexus is the cause of the fatal result Another theory is that death is due to total suspension of the so called internal secretion of the pancreas, the secretion formed by the islands of Langerhans, which, by extensive death of the pancreatic tissue, are involved

Dr Frank E Waxham, Denver, narrated a case of Hodgkin's disease which he saw five years ago The patient was a young man, 23 years of age The glands of the neck were very much enlarged There was a tumor of the liver as large as a fist that could be clearly outlined The case was inoperable The patient was placed on *x* ray treatment, and the result was marvelous, in that the enlargement of the glands, in the course of three months, entirely disappeared. The tumor of the liver also disappeared There were no unpleasant results followed the use of the *x* ray Two years later the enlargement of the neck and the tumor of the liver had not returned A year later the patient was still well

Management of the Diabetic.

Dr E P Hershey, Denver, said that the treatment varies according to the individual Much harm is done by too rigid a diet Acidosis, acetonuria, gastric disturbances and complications arise from a fixed diet Carbohydrates may be given, if done so judiciously The scientific technic is too difficult to be carried out by the general practitioner Close observation, however, will aid much in the line of diet It is possible that diabetes is first a functional disorder, eventually creating a vicious cycle The treatment directed along this line will accomplish better results than any other He cited several cases in which he has employed anhalonium (Mescale button) in this disease with gratifying results

DISCUSSION

Dr. H A Black Pueblo, said that the dietetic and hygienic management of diabetes has with him proven most successful The dietetic treatment should not look to the elimination of the carbohydrates, but the individual should be considered and the diet so altered that the strength of the patient will not only be maintained, but increased Many of these patients are nervous, spare in build, and they suffer the most if the carbohydrates are withdrawn These patients should be given fat meats that they can assimilate, care being taken not to disturb the digestion, and combined with them as much carbohydrates as the patient will tolerate It will be found very often that if there is complete withdrawal of the carbohydrates for three or four weeks, the patients will be able to take more of this class of food than they could before Exercise should be adapted to the special individual

Dr. E C Hill, Denver, has used the fluid extract of anhalonium in several cases of diabetes mellitus, with better results than he obtained from codeia and other agents

Dr Hershey, in closing, said he has never used a remedy that has effected so many cures, or has been as beneficial to the patient, as the fluid extract of anhalonium He usually commences with six minims, four times a day This may be increased, according to the judgment of the physician

Dietetics Diagnostic and Therapeutic Value

Dr C D Spivak, Denver, presented some general considerations of the physiology and pathology of nutrition. He considered the diagnostic value of test meals and test diets for ascertaining the digestive functions of the stomach and bowels and its relation to pain, discomfort, palpitation of the heart, etc He alluded to the therapeutic value of foods acting medicinally as tonics and sedatives in general, and as gastric and intestinal tonics and sedatives in particular, acid and antacids, anodynes, anthelmintics, motor excitants, emetics, diuretics, diaphoretics, aphrodisiacs, lactogogues, etc In discussing organo therapy he spoke of the use of testiculin, spermin, thyroidin, adrenalin, cerebrin, medullin, etc., kephir koumiss cures, grape and orange cures, vegetarian and meat cures, water and dry cures, fasting and forced feeding

The Profession and Its Advancement.

Dr H G Wetherill, in the president's address, said that we have reason to be proud of the achievements of the American Medical Association in its coördinate bodies, state and county, in the direction of better organization and increased membership In these particulars the Colorado State Medical Society has shared in the honors, more than doubling its membership in three years, and establishing itself on a basis that makes it a power in the community and a source of strength and inspiration to every one of its members In its effort to raise the standard of medical education the American Medical Association, he said has adopted a particularly commendable policy, and the minimum standard, as suggested by the Council on Medical Education, and adopted by the Association, should be universally approved and adopted by all medical schools, and its provisions rigidly and conscientiously enforced

He commended The Journal of the Association and its courageous editor for the stand they had taken against the venders of nostrums and secret proprietary preparations

The time is at hand, he said, when the number of graduates in medicine should be diminished rather than increased, and he believes that measures must soon be adopted for the further limitation of the number of medical graduates each year Incidentally, he has hoped that this might be promoted in Colorado through the transformation of one of the medical schools into a postgraduate school of medicine As there are but four cities on this continent where such postgraduate schools are conducted—Chicago, New York, Philadelphia and New Orleans—it would be fitting and timely and altogether advantageous if one Colorado medical school could be so transformed He hopes the day is not far distant when this suggestion may be considered seriously and some practical solution of the problem presented

It has seemed to him that the recent graduates of medical schools are prone to give themselves over to special and limited practice far too soon after graduation, and with insufficient preparation for special work, depriving t [illegible] the broadening influence of a few years of

In Denver the unrestricted and unl

offered all comers have induced

petent persons to undertake serious surgical work which they can not execute with a reasonable degree of safety to the patient or to their own or to the hospital's reputation, with the result that there has been a too great, needless and inexcusable sacrifice of human life, and the hospitals and surgeons have been obliged to bear the reputation so acquired and share the opprobrium.

He condemned graft and grafters in the medical profession, and censured those who divide fees and give commissions.

Gastrointestinal Toxemia.

Dr. Herbert B. Whitney, Denver, described a form of gastrointestinal toxemia in infancy and childhood which, he said, is fairly common, but is not described in books. It pursues a typical course of from four to seven days. The chief symptom is fever. The gastrointestinal symptoms are not characteristic and are often lacking. The diagnosis is made by exclusion, meningitis and pneumonia being oftenest suggested. The prognosis is generally good. Complications are rare. Illustrative cases were cited.

Principles of Infant Feeding

Dr. A. G. Taylor, Grand Junction, said there is no substitute for mother's milk. The proper food for an infant deprived of Nature's method of feeding, is cow's milk, properly modified. The so-called prepared foods are not to be recommended. Whether or not the child is to become a healthy and vigorous adult depends to a large extent on its nutrition in the earlier months of its life. Of all the factors that enter into the problem, digestion and assimilation stand preëminently at the head. The child should be fed in such a manner as not only to escape the early effects of indigestion, diarrhea, etc., but the subsequent dangers of nutritional diseases, as scurvy, rickets and marasmus, and the possibility of degenerative troubles.

Swing of the Pendulum, or Renaissance of Internal Medicine

Dr. T. B. Moore, Canon City, said that internal medicine has been partially eclipsed in the last two decades by the brilliant achievements of surgery. As young men are attracted by the latter, they neglect the former, despite great advances. Surgery is attractive, in part, because of better compensation. The question of fees, especially the division of fees in referred cases, must soon be settled by a fuller recognition of the claims of the general practitioner.

The chief factors in producing conditions antecedent to the beginning of the renaissance are ignorance of the public in relation to medical matters, failure to emphasize therapeutics and prescription writing by medical teachers, an awakened public as the result of exposure of fraud by proprietary medicine, and nostrum vendors, an outraged profession as a result of unethical advertising in medical journals. The coming renaissance will relegate polypharmacy to the rear. There will be improved therapy as a result of a more rational conception of disease.

Has Regular Medicine Kept Pace with the Art of Healing?

Dr. J. K. Miller, Greeley, said that from the earliest prehistoric application, the art of healing has been modified from century to century. Regular medicine was the first system which was established with any permanency. It met its first opposition about the dawn of the nineteenth century in the discovery of similars by Hahnemann. The regular school was then, and is now, so closely wedded to medicines that it often proceeded to its detriment along lines as unscientific as those of veriest quackery. It must be held responsible for the heterodox systems now clamoring so loudly for patronage and state recognition. The trend of modern life, the search for wealth, the dissipations of comfort and luxury have produced many physical evils in which medicine does not obtain. Divine healing, Dowieism, Eddyism and kindred cults have met with such unprecedented recognition as to indicate the necessity of emphasizing psychic rather than material remedies.

The Free Dispensary as a Factor in the Tuberculosis Crusade

Dr. A. S. Taussig, Denver, spoke of the benefits to be derived from the free dispensary by the public and the medical profession. He pointed out the harm that follows in the wake of free dispensaries. He laid stress on the duties of medical colleges and other organizations that support free dispensaries, and pointed out the relations of such dispensaries to the medical profession at large.

Physician in Politics

Dr. Charles F. Andrews, Longmont, believes the time is opportune for the medical profession to take a political stand and thereby receive proper medical legislation. All practitioners should be known politically as men who place their membership in the American Medical Association far above all partisan political faith. Physicians should study city, county, state and national politics.

The Doctor and the Public

Dr. E. Stuver, Ft. Collins, pointed out (1) the ancient origin and function of the early physicians. (2) The demoralizing effect of the Dark Ages on medical science. (3) The relative importance hitherto attached to war or life destroying as compared with medicine, a life saving vocation. (4) The necessary qualifications for the successful physician, (a) he should have a strong physical organization, (b) he should have a broad, thorough, general and scientific education, (c) he should be of unimpeachable character, and should have careful moral training. (5) A properly qualified and impartial board of examiners should pass on the character and qualifications of every applicant who desires to practice medicine. (6) Physicians should take an active part in all sanitary matters. (7) "Patent" and "fake" medicines should be opposed by the united efforts of the medical profession.

Surgical Aspects of Stomach Disorders From the Standpoint of the Internist

Dr. James Rae Arneill, Denver, said there is an increasing tendency to resort to the surgical treatment of certain chronic and acute diseases of the stomach. Operative interference should not be indiscriminate, but should be controlled in most instances by a careful, painstaking study and resort to well recognized diagnostic measures. He described cases which are cured or helped by surgery, also cases which surgery does not help. Increasing experience is teaching more wisdom in the selection of cases. The surgeon and the internist should work hand in hand, as correct diagnosis and accurate appreciation of the *tout ensemble* are of paramount importance. He considered the easily applied and useful diagnostic measures, and presented conclusions drawn from a study of cases before and after operations.

Observations on Experimental Stomach Surgery

Dr. A. R. Pollock, Antonito, reported observations based on thirty-six operation on dogs. 1. Gastroenterostomy by the Murphy button, at the end of three days the abdomen was opened and button found *in situ*. 2. Gastroenterostomy by the Murphy button, at the end of five days the abdomen was opened, and button found *in situ*. 3. Gastroenterostomy by the Murphy button, at the end of six days button was found free for 4/5, but still holding by 1/5 of its circumference. 4. Gastroenterostomy by the Murphy button, at the end of eight days the button was found in the ileum a few inches below the site of anastomosis. 5. Gastroenterostomy by the Murphy button, button passed by animal on tenth day. 6. Gastroenterostomy by the Murphy button, on fourteenth day button was found in the ileum. 7. Gastroenterostomy by the button, on fifteenth day button was found *in situ*, although the tissue in the bite of the button had sloughed away. He concludes that the time required for the button to free itself and pass from the site of anastomosis varies greatly, but at least seven days are required.

Ectopic Gestation.

Dr. T. A. Stoddard, Pueblo, said that Tait was the first to formulate conditions and methods of procedure definitely. The true cause is indefinite and more difficult of elucidation in individual cases than are the causes of appendicitis. It is certain, however, that the malformation of tubes and uterus is no more a causative factor than diseased condition of these organs. Many cases go unrecognized, nature coming to the rescue and the patients recovering, others die after the first sudden exhausting hemorrhage, and this is more likely to occur when the rupture is near the uterine end of the tube, and hence during the early weeks of the existing pregnancy He does not believe that a long period of sterility is in any sense an indication—in conjunction with other symptoms—of the existence of an ectopic gestation

The diagnosis if possible, should be made before rupture, but many patients do not consult a physician until rupture, in fact, rupture sometimes occurs before the patient suspects that she is pregnant

Surgical procedure is the only thing to be considered for the relief and cure of these patients Attempts to palliate the condition or to destroy the fetus by hypodermics, electricity or medicine belongs to a past age, when abdominal surgery was scarcely thought of Operation through the vagina is an evidence of grave uncertainty of diagnosis, and can only result in incomplete and bungling surgery, and is only attempted by men who have made or are making strenuous efforts to convert the vaginal canal into a highway by which they may reach notoriety

Mind Cure Its Service to the Community

Dr Richard C Cabot, Boston, said that the mind cure movement has rendered notable public service because its main ideas are important and in spirit, if not in their letter, true The mind cure movement exerts the force of healthy criticism on the tendency of physicians to (a) ignore the possible aggravation of disease by mental effects of the methods of diagnosis and treatment which they use, (b) to encourage the truth habit, and (c) to treat neurotic cases either by an attenuated and diluted mental régime or by "sitting on the safety valve"

Bradycardia in Appendicitis

Dr. Maurice Kahn, Leadville, does not recall encountering bradycardia in a case of appendicitis that did not present gangrene In the last six cases of gangrenous appendicitis in which this symptom was evinced the diagnosis of the gangrenous stage was made before operation, based on the bradycardia alone, so that given a case presenting other unmistakable signs of appendicitis, with a subnormal pulse, a tentative diagnosis of gangrene may be maintained

The cause of this symptom in appendicitis is probably to be ascribed to the absorption of a ptomain or ptomains into the system which act on the cardiac centers or ganglia as is not infrequently seen in jaundice chronic digestive disturbances etc, but is not akin to the slow pulse observed during convalescence from some of the acute fevers, wherein it is local evidence of impaired reactive power the result of inanition Cases were cited in point.

Peritoneal Drainage.

Dr D P Mayhew Colorado Springs prefers the rubber tube of large caliber to glass tubes or gauze He reported seven cases of diffuse purulent peritonitis, with one death, which were treated with drainage and but little surgery The indications in these cases are met best by rapid operation with as little handling of the abdominal contents as possible even to the point of allowing the original focus to remain if not easily and quickly removed, drainage in the Fowler position by means of tubes or gauze or both brought out at the lowest available point and reaching the lowest pouch of the peritoneum copious salt solution enemata three to four quarts in twenty four hours prevention of peristalsis by allowing nothing by the mouth If these procedures be followed faithfully the mortality may be kept down to a comparatively low point

Attitude of General Practitioner Toward Obstetrics

Dr. E. F Evans Fort Morgan emphasized the importance of cleanliness in obstetric work including the refusal of the general practitioner to attend labor cases when in attendance on patients ill with contagious diseases He said there is a crying need for teaching more thoroughly the more common operations of obstetrics and that obstetrics should receive more consideration in comparison with surgery

The Successful Obstetrician

Dr. D V Meiklejohn, Somerset, said that practical bed side work is essential in the training of the new physician Obstetrics receives too little attention in our societies Close cropping of the hair and washing of external parts with soap (sterile), and an antiseptic douche, prepare the average patient for labor Frequent examinations are fraught with danger The same may be said with regard to introducing fingers into the vagina to assist in delivering the placenta by making traction on its folds He sees no objection to making slight traction on the cord and delivering the placenta by Credé's method Perineal lacerations should be repaired at once, cervical lacerations not until after the lying in period He sees no merit in the abdominal binder, but uses it more as a placebo

Miscellany

Influence of Thyroid Feeding on Susceptibility to Poisons.—The experiments of Reid Hunt (*Jour of Biologic Chemistry*, Vol 1, No 1) show that thyroid feeding renders white mice much less susceptible to the toxic action of acetonitril, but has no effect on the toxic dose of sodium nitroprussid or of hydrocyanic acid This indicates that the thyroid preparation does not act by increasing sulphur compounds by metabolism of proteids, but by some specific antitoxic power Proteids (such as casein, nutrose, peptone), nuclein and preparations of the thymus and of the suprarenal glands counteract to some extent the neutralizing or protective power of thyroid gland against acetonitril It was found that thyroidectin increased slightly the susceptibility of mice to acetonitril

What Is an Alkaloid?—W A Puckner in the *Pharmaceutical Review*, 1906, Vol. XXIV, p 228, discusses the meaning attached to the term alkaloid by different authorities He states

> It is well known that the term alkaloid is subject to several definitions. While some apply the term to all vegetable bases that is, to basic bodies occurring in plants others restrict the word to those basic substances derived from or related to pyridine. According to the latter interpretation caffein theobromin and even morphin are not alkaloids Further whether the first or second definition be accepted the term base is still open to different interpretation While some alkaloids react with water to form hydroxids which are strongly ionized and hence are strong bases and form well-defined salts the hydroxids of others show little tendency to ionize, hence their salts in presence of water because of hydrolysis break up into free base and acid Thus while salts of caffein may be prepared these when dissolved in water are so largely hydrolized that the free base may be abstracted from such a solution by means of immiscible solvents Therefore even if the first definition be adopted it is still a question whether or not caffein is to be considered an alkaloid In the seventh revision of the United States Pharmacopeia caffein is described not as an alkaloid but as a feebly basic substance yet under the prescribed tests of purity appears one which shows the absence of other alkaloids and one is left in doubt whether or not caffein is considered to be an alkaloid In the eighth revision it is again stated to be a feebly basic substance but the test just referred to is said to indicate absence of alkaloids and from this it would appear that officially caffein is not an alkaloid With this point of view the subcommittee on proximate assays appears not to have agreed since fluid extract of guarana is required to contain in 100 cc 3 5 gm of the alkaloids from guarana.

The Milk Question in Maryland.—The association of a number of the citizens of Maryland in the effort to advance the cause of the prevention of tuberculosis which resulted in the holding of the Baltimore Tuberculosis Exhibition has resulted in similar combined effort to improve the milk supply This was attempted by a series of public lectures and exhibitions of model dairies nurseries, laboratories etc The results are not yet fully known, but according to H W Steele (*Charities and the Commons* Aug 4, 1906) more rigid inspection by public officials has been secured dairymen have been stimulated to improve their methods the physician is demanding more certified milk' and the layman takes more thought concerning the milk which he uses than he ever did before This number of *Charities and the Commons* contains some instructive pictures of the exhibition and abstracts of the various lectures J S Fulton draws a striking picture of the possibilities of the contamination of milk by the milkman after it has left the dairy, and urges that clean milk can only be secured by requirements which will necessitate an increase in price to the consumer G W Goler states it as his belief that most babies become sick because they are infected by the bacteria and poisons of stable manure contained in dirty milk, and that to keep children well it is necessary to protect them from the dirt in milk just as much as we would protect them from diphtheria or scarlet fever infection. S C Prescott believes that the farmer's side of the case has not always been fairly considered He thinks that "if the farmer were to receive five or six cents a quart and were told how to produce clean milk, many of them would do it This would mean, of course, that milk should cost the consumer ten cents, which is a reasonable figure compared with the cost of other foods" G M. Kober, in treating of morbific and infectious milk, again emphasizes the fact that "ideal milk supplies can not be attained without increased cost of production, and in the interest of public health and the many helpless babes deprived of their natural food, we should be loyal to our American conception of 'square deal'" The concluding lecture is by A Jacobi, and deals with the "Rôle of Pure Cow's Milk in Infant Feeding" These articles indicate a gratifying public interest in this important subject The necessity of providing pure food for babies is so evident as to need no comment except to approve every effort in this direction It may be debated, however, whether or not the nutritive value of milk as a food for adults will justify any great increase in its price At ten cents a quart milk solids would cost about forty cents a pound, or making allowance for the greater nutritive value of fat, would be six times as expensive as flour If practicable, it would seem that the goal might be more surely reached by encouraging the production of a special milk for infants, children and invalids, allowing the sale of a cheaper milk for adults, which, however, should be made to conform to reasonable regulations regarding cleanliness

The Labyrinth in Various Animals and Birds—Albert A Gray, Glasgow, in the *Journal of Laryngology, Rhinology and Otology*, reports his studies of the anatomy of the internal ear in sixteen mammals, and finds that the various orders and species present differences in three main types 1, Differences in shape of the cochlea, 2, differences in size of the perilymphatic space of the semicircular canals, 3, differences in the size of the otoliths The cochlea appears in mammals in two types in addition to the peculiar type of the organ found in the monotremes These types are the sharp pointed cochlea found in the carnivora and the rodents, and the flattened cochlea found in man, monkeys, lemurs, ungulates and cetacea The one exception found among the carnivora is the seal In regard to the perilymphatic space, Gray states that in the human subject this space is large and well developed, and that it has been assumed that such would be the case in the lower animals, but investigation proved that this is not the case Man is one of the exceptions to a very general rule In mammals, as a rule, the perilymphatic space is either very small or even completely absent in the canals The exceptions to this rule are man, monkeys and seals Gray states, however, that it is possible that the original type of the mammalian labyrinth possessed a well developed space as in the reptiles and birds This is the type invariably found in all the specimens examined At present, he states the presence of a well developed perilymphatic space in the canals may be regarded as indicating a labyrinth of a more ancient type He considers the presence or absence of this space a valuable guide to the relationship of different orders and species of animals, and that its value is enhanced by the fact that the space does not appear to have any physiologic function even as regards equilibrium The otoliths of mammals have seldom been examined carefully, it being assumed that they are small This assumption, Gray states, is in the main correct but he has discovered two exceptions, the porpoise and the seal

Chemical Discoveries in Switzerland and Germany—According to the *Zeitschrift des Allgemeinen osterreichen Apotheker*, a commercial treaty is under consideration between Switzerland and Germany which will give the protection of the patent laws to chemical discoveries It is proposed by the Swiss federal council, however, to except medicines from the protection of patents This is in accordance with the desires of the Swiss pharmaceutical association that the price of these articles may not be enhanced The chemico pharmaceutical industry demands protection for the process of preparation with the intent that the material, the medicine as such, shall remain free This request is warmly supported by the press of Basle, a city which is prominent in chemical manufacture It is claimed that the chemist has the same interest in the discovery of a remedy as in any other technically applicable discovery The exclusion of new processes of manufacture of medicines from the protection of the patent laws must have the effect of restraining the eagerness of the chemist to enter on such investigations To secure the protection of pharmaceutico chemical processes the chemical trade of Basle has addressed a circular letter to the members of the national council and the committees of the national and cantonal legislatures The representatives of the chemical industries claim that patenting the process of manufacture will not increase the price of the medicine But a writer in *Der Bund* refutes this claim by showing that the price of articles protected by patents on manufacturing processes are from ten to fifteen times higher in Germany than in Switzerland The sudden cheapening of patented products when the patent expires indicates the same thing It is noticeable that the German manufacturers in making application for patents are careful to include other processes for making the same product, so far as possible, thus securing to themselves the same monopoly as if the product itself were patented.

Intestinal Putrefaction—Leo F Rettiger thus summarizes the results of his work on putrefaction in the *Journal of Biologic Chemistry*, August, 1906 Putrefaction is the work of anaërobes, and of all the organisms examined thus far of strict anaërobes only The best known of the putrefactive anaërobes are *Bacillus putrificus*, the bacillus of malignant edema and the bacillus of symptomatic anthrax Egg meat mixture and blood fibrin are readily decomposed by them, yielding the foul smelling products that are so characteristic of real putrefaction, particularly mercaptan In pure cultures of these organisms, however, indol, skatol and phenol are not produced, or only in very minute quantities Except in a few rare instances, putrefactive organisms of the above type have not been observed in feces, either of normal persons or of those suffering with pernicious anemia, even when the stools had a decidedly offensive odor In the large majority of cases, however, feces have a more or less putrefactive action on the egg meat mixture, sometimes causing a reduction in the bulk of the proteid of from 25 to 30 per cent. This action is most pronounced, as a rule, after heating the tubes for ten minutes at 80 C This heating favors putrefaction, probably by destroying organisms of the colon group already existing in the tubes and thus removing their inhibitory influence The *Bacillus enteritidis sporogenes* of Klein is regularly present in human feces, and although commonly regarded as being a purely fermentative organism, it may be at least partly responsible for putrefactive changes in the intestine The observations recorded in this paper strongly support the view of Bienstock that the *Bacillus coli communis* and *Bacillus lactis aërogenes* are not harmful inhabitants of the intestine, as is so often thought, but that their function is a protective one. Their presence in any putrefying medium is a hindrance to the work of the putrefactive bacteria, and therefore serves as a check on their activities

Solubility of Uric Acid—His and Paul found the solubility of uric acid in water to be nearly 1 part in 40 000 A E Taylor (*Jour of Biologic Chemistry*, January, 1906), finds that in bovine blood saturated with carbonic acid it is soluble to the extent of 1 part in 1 000, or forty times as soluble as in water The increase of solubility is not due to combination with the alkaline metals of the blood which is prevented by the presence of excess of carbonic acid The increased solubility due to absorption by colloids is considerable since a solution of neutral globulin in water will hold about five times the amount soluble in the same volume of water The larger part of the uric acid must therefore be held in some complex combination, in which the uric acid figures in all probability as the molecule. Taylor calls attention to some misconceptions regarding the relations of the uric acid in the blood. There are only two kinds of uric acid salts with metals known. For instance we have mono sodium urate and di sodium urate. Both these compounds are alkaline, the mono sodium urate being only feebly so. The so called quadri urate does not exist so far as known. Taylor believes that the blood can not properly be called alkaline, but is in reality neutral, and that variations in the solubility of uric acid in the blood do not depend on variations in the alkalinity of that liquid. He has found uric acid present in bovine serum, but has made no study of human blood serum as the quantities of blood necessary render such an investigation impractical.

The Awakening.—The whole medical profession of this country is just waking up to the fact that it has been slumbering and dreaming for many, many years, says the *California State Journal of Medicine*. But already signs of a new activity are in evidence in many portions of our country. In many communities the best physicians will not make insurance examinations for less than $5. They are discussing the lodge practice evil and coming to realize the insult to professional intelligence in proffering a pittance for wholesale professional services. Most physicians who are not either moribund or densely ignorant are beginning to ask "impertinent" questions about the composition of the all too numerous "secret proprietary" medicines offered to them by glib tongued "detail men." Occasionally we hear a protest against the gratuitous educational remarks of some boorish drummer who undertakes to tell physicians all about the special and particular virtues and advantages of the nostrum manufactured by his particular "house." Most of the state journals are very much awake and are working hard to try and wake the slumbering members of the profession, but, unfortunately, some are either asleep or, to judge from their advertising pages, are to be classed with the predatory privately owned journals. Doubtless the respectable element in these particular associations will prevail in time and these few state journals will then cleanse themselves and "be good."

Proprietary Remedies in Austria.—While in the United States organized attempts to oppose the encroachments of proprietary remedies have originated entirely or almost entirely with the medical profession, in Austria, according to the *Pharmazeutische Post*, Aug. 12, 1906, the matter has been taken up by the pharmacists who have prepared a list of prescriptions called "*prescriptiones Viennenses*," which are to be used as substitutes for the principal specialties and which are to be kept in stock by the pharmacist who will dispense them on physicians' prescriptions in ordinary medicine bottles and with any additions that the physician may order. The objectionable literature that reaches the patient with the original packages of the ordinary proprietaries is thus avoided and the medicine is at the same time cheaper for the patient. The physician is not obliged to write out every time the exact ingredients of the mixture, but can refer to it by a convenient name. These preparations have been devised by a Vienna specialty commission representing a number of Austrian pharmaceutical societies, and an appeal has been made to medical men to give the movement their support on the ground of economy to patients, avoidance of self prescribing, control of quality of drugs, retention of confidence of patients.

A Plea for Organization.—The medical profession of the United States is on trial to-day before the people of this great country as to whether it is capable of compact and complete organization. The unit is the county society. Unless we can combine these in a strong state body we are scattered bands and can accomplish but little. By united action we can make the county and state societies what we will to make them—we can adopt such means and put such men in power as will best promote and represent the aims we have in view. The power is with us if we only choose to organize and use it. The opportunity is a great one, and no physician can afford to be dominated by the little things and withdraw his hand from the greater work. For self protection alone we need this power—we need it, too for higher reasons, which every true physician appreciates, to increase the usefulness of a noble and responsible calling, and bring better rewards to those who serve faithfully. The cost is insignificant, the good to be attained is boundless, or at least bounded only by our faith and our work. Let us come together and stand together like men.—B. F. Eager, in *Kentucky State Medical Association Bulletin*.

The Value of the Hospital Kitchen.—The first place in which all the best scientific knowledge of food as a remedial agent should be applied is in the hospital kitchen. The hospital kitchen of the future will rival the operating room in cleanliness and convenience when it is clearly recognized that the skill of the physician or surgeon is of but little avail if the diseased and inflamed tissue can not be replaced by normal conditions. Nothing but food can furnish the blood current with the substances from which the cells may choose those essential to them. However fully he may be sustained for a time by the products of the chemist, it is of the utmost importance to the final recovery of the patient that he desire natural food in sufficient quantity to regain his strength. The neglect of the heart of the whole hospital, the kitchen, is hard to understand until we realize that this same neglect permeates the community in regard to individual homes, and that the medical schools treat of food only in relation to disease, and not in relation to healthful living.—*National Hospital Record*.

A Higher Plane of Conduct.—Why do we linger on the threshold of the most promising organization ever set before us when the needs of the times demand this of almost every calling, not only to succeed but to survive? It is hardly reasonable to say that there is more selfishness and unscrupulousness in this than in other vocations, when the calling itself demands and develops the higher and more generous traits—when the very atmosphere not only tends to develop these, but to restrain the baser tendencies. Considered even from a selfish standpoint, organization would enable us to maintain a higher standard by the mutual improvement and inspiration of association, making us better acquainted with each other and giving us more sympathy one for another, and clearing away many times misunderstandings, and keeping us all, by a sort of generous rivalry, on a higher plane of conduct and bearing toward one another and toward the world.—B. F. Eager, in *Kentucky State Medical Association Bulletin*.

Separation of Morphin from Glycerin.—H. M. Gordon (*Amer. Journal of Pharmacy*, 1906, page 404) reports that separation of morphin from solutions containing glycerin is exceedingly difficult. After trying various methods he found that the following gave the best results. The glycerin solution of morphin sulphate is treated with an excess of normal iodin solution and the liquid diluted with water to about three times the original volume. On standing over night about 80 per cent. of the morphin taken crystallized out as the characteristic morphin hydrogen triiodid. The crystals were collected on a small filter, washed with water containing a little Wagner's reagent and then dissolved by adding a few cubic centimeters of a 10 per cent. solution of sulphurous acid. In this way the alkaloid is obtained in a liquid perfectly free from glycerin. On adding a slight excess of potassium carbonate and heating to about 100 degrees for a minute or two the alkaloid will crystallize out on standing.

Liability in France for Surgeon's Fee.—It is reported that a surgeon was called to a very sick woman in Paris, and that her mother begged the physician to "save her daughter at any price." An operation was performed, but the patient died. The surgeon's fee was $6 000, which the woman's husband, a comparatively poor man, was unable to pay. The surgeon then sent the bill to the mother and on her refusal to pay, appealed to the court. The court held the husband responsible and freed the mother from all liability, but appeal to the higher courts resulted in a reversal of this decision. The judge accepted that the appeal to the surgeon to save the daughter at any cost was an order to operate, and the mother was compelled to pay the fee.

Detection of Formaldehyd in Milk.—S F Acree has investigated Hehner's test (*Jour of Biol Chem*, August, 1906) and finds that it is sensitive to the degree that it will detect 1 part of formaldehyd in 250,000 By fractional distillation it is possible to collect the formaldehyd so as to detect 1 part in 3,000,000 in 20 c c of milk No other aldehyd tested gave the reaction except vanillin The reaction is due to the proteids of the milk and is more intense the greater the proportion of proteid Other complex proteids give the same reaction The most intense reaction is produced by the globulin from squash seed, this becomes a valuable substance to add to solutions to be tested for formaldehyd. The reaction is made by mixing the milk with an equal volume of water and four volumes of concentrated sulphuric acid in which there is a small amount of a ferric salt If formaldehyd is present in minute quantity the solution soon acquires a violet color

History of Medicine.—Just why medical colleges do not provide for the teaching of the history of medicine is because the curriculum is already filled to overflowing, and the harassed student does not need to be further overburdened One may think what he will, but the reason why so many seek the walks of medicine in life is to make a livelihood, believing it can be done with very little work After trying for a while the tyro generally finds that he has made a huge mistake, and very often wishes for other employment The study of medicine is a pleasurable and interesting study, the practice is a very different thing One way to accomplish instructing the student body in both the history of medicine and the code of ethics is to take these matters up in their own medical and literary societies, which now seem to be pining away for want of support We can not too often keep before us the example of the masters of the past —*Dominion Medical Monthly*

Toxicity of Sodium Chlorid.—W J V Osterhout (*Jour of Biologic Chemistry*, March, 1906), has shown that dilute solutions of sodium chlorid quickly kill spores and young plants of certain algæ, although they will all live in distilled water for weeks, and will live and grow in sea water or in mixtures containing small quantities of magnesium chlorid, magnesium sulphate, potassium chlorid, and calcium chlorid in addition to sodium chlorid. The added salts taken singly are nearly as poisonous as sodium chlorid, but in their mixture the individual toxic actions counteract each other so that the solution is harmless Loeb has termed such a mixture a balanced solution and has emphasized the fact that the blood as well as the sea water is in fact such a solution Such investigations are very suggestive of the disturbance that may arise from changed relations among the inorganic salts of the blood

Colloidal Form of Strychnin—O H Brown (*Jour of Biol Chem*, August, 1906) finds that strychnin mixed with hydrogen dioxid and albumin, yolk of eggs, or organic extracts will gelatinize in about six weeks, producing a mixture or compound with the proteid which is toxic by the stomach only after digestion has occurred, and is only very slightly toxic if injected subcutaneously It is not probable that the strychnin is oxidized by the hydrogen dioxid, but other antiseptics can not be substituted for it in the production of the strychnin jelly The presence of the albumin or other organic matter in the jelly appears to interfere with the ordinary tests for strychnin It is probable that other alkaloids may combine with proteids in a similar way The experiments of Brown indicate that this is certainly the case with suprarenal alkaloid

Acetonuria After Anesthesia—The study of the urine in 41 cases of anesthesia by Helen Baldwin (*Jour of Biologic Chemistry* January 1906) confirms the results of Greven, Brewer, Bevan and Favill, who found acetone in the urine following anesthesia Dr Baldwin found it in all but three cases The other characteristics of the urine were higher specific gravity and more strongly acid reaction The amounts of ammonia and of organic acid were usually decreased and the products of intestinal putrefaction were not materially altered The kind of anesthetic and the duration of the anesthesia exerted no particular influence on the appearance of the acetone and as the anesthetic in these cases was followed by no untoward result the appearance of acetone may be regarded as a perfectly normal phenomenon after anesthesia

Book Notices

How to Suppress a Malpractice Suit and Other Medical Miscellanies By Thomas Hall Shastid, A.M., M D., LL.B Cloth. Pp 128 Price, $1 50 Marion, Ill Marion Publishing Co 1906

To judge from the title on the cover and from the running heads on each page throughout this book, one would naturally conclude that it was a treatise on "How to Suppress a Malpractice Suit" As a matter of fact there is but one chapter devoted to the subject, and the book bears the title of this chapter The advice given in this first article is of such a character that no honorable, self respecting physician could follow it The other chapters are on various matters of more or less interest to physicians and make interesting reading

Technique du Traitement des Tumeurs Blanches By F Calot Chirurgien en chef de l hôpital Rothschild etc. Paper 192 Illustrations Pp 272. Price, 7fr Paris Masson et Cie, Editeurs, 1906

The words "*Tumeurs blanches*" are the French equivalent of the English popular term "white swellings" commonly used to signify the tuberculous swellings of the joints In the present volume the subject is considered from a therapeutic point of view and the treatment mainly advocated is not that of long lasting fixation in plaster casts or resection, but the use of intra articular injections of antiseptics, including mixtures of ether, creosote and iodoform, or camphorated naphthol in glycerin, formulas for which are given The technic is given in the fullest detail and the author, basing his opinions on his own experience, advocates this in preference to all other methods, though he does not entirely exclude the use of orthopedic measures in the treatment or of operations in special cases, and, of course, he does not neglect the later methods of massage, electrization and exercise The principal thing in his method, however, is to get at the tuberculous focus, and this by methods other than severe cutting operation To insure the functional recovery the plaster applications should not be continued too long, and the limb should be kept at rest six months after the removal of the envelopes By this means Calot claims he can cure the great majority, even 90 to 100 per cent. of the cases, and if an ankylosis or stiff joint should still be the result, the limb will nevertheless be in good position without loss of length and capable of doing considerable good service The cure will require also much less time than by the old non cutting methods and can be accomplished by the ordinarily skilled practitioner without serious risk He claims a personal knowledge of over a thousand cases of cure treated almost exclusively by this method Whether the method is all that the author claims for it is yet to be proven

Influence of the Mind on the Body By P DuBois, M.D Professor in the University of Berne Translated from the Fifth French Edition by L B Gallatin Cloth Pp 63 Price, 50c. net. New York Funk & Wagnalls Company 1906

This little work is intended for the public rather than for physicians It is a readable and sensible explanation of the principal facts regarding the effect of the mind on the body in the production of morbid feelings and the simulation of actual disease We say actual disease although the disease as it is felt by the patient is often sufficiently real to him at least, and it appears that the increase of nervousness in our modern civilization is as marked abroad as it is in this country The hygienic instructions here given are sensible, and we believe the translation and presentation of the work to the English reading public will do good The translation is admirable and the publishers have produced the work in a very attractive form

Le Vieillissement Artificiel des Vins et Spiritueux By Frantz Malvezin Directeur de Penophile etc. 16 Illustrations Paper Pp 95 Price 1 fr Paris Jules Rousset 1906

This work is of economic rather than of medical interest, but the subject has also its medical side Wines and liquors are perhaps, of all articles of diet, if they could be thus included the ones most subject to sophistication and adulteration It is very possible if not indeed probable that by far the largest proportion of the alleged foreign wines and liquors sold in this country never saw a foreign country, or if they did, are not the genuine article they claim to be Moreover, the genuine article itself in its most desired pure and perfect state, is not always obtainable at its place of production, and when it is thus obtained it is only as the result of a tedious process of aging, care and treatment, involving enormous losses which correspondingly increase the price of the perfected article To prevent such losses and for the profit of the producers, some 60 or 70 patents have been issued in France for the artificial perfection of French wines and cognacs during the last 25 years The present little volume treats of the methods of artificially aging the French wines and liquors, a sort of sophistication that is objectionable insomuch as it may be reasonably assumed that the artificial process can hardly reproduce the natural product, and it is not likely that it will bring about the possibility of a more authenticated supply of the average French wines and liquors in common use As the French manufacturer in the story said to his son, "You can make wine of anything, even grapes"

Preservatives in Food and Food Examination By John C. Thresh M D (Vic.) D Sc. (Lond.) F I C. and Arthur E. Porter M.D M.A (Cantab) Cloth Price $4 50 Pp 484 Philadelphia P Blakiston s Son & Co 1906

The great interest at the present time in the question of food preservatives is likely to secure a wide circulation for the book before us The names of the authors, in themselves, tend to create confidence in the general accuracy and fairness of the treatise, and a rather detailed examination of this book shows that such confidence on the part of the reader will not be misplaced In addition to a discussion of the nature and amount of preservatives ordinarily added to certain classes of foods, methods for the detection and estimation of various impurities and preservatives are given, and the legal aspects of the subject from an English standpoint are presented with great fulness On the whole, the book can be depended on for an impartial view of the many vexed qeustions that arise in connection with these topics It might be, indeed, urged that the desire to maintain a judicial attitude has sometimes led to mention or even elaboration of data of doubtful value, but while the evidence is so conflicting as at present it is to err in the right direction Altogether the book can be recommended as a fair and full summary of our present knowledge regarding food preservatives, their abuses and dangers Later editions of the work, if they appear, will probably treat the material in a more critical fashion, and, it might be added, new evidence that will permit of more critical treatment is sadly needed in many directions Some plates of doubtful value and an excellent index conclude the volume

A Text Book of Sanitary and Applied Chemistry or The Chemistry of Water, Air and Food. By E. H S Bailey Ph D Professor of Chemistry University of Kansas. Cloth Pp 343 Price $1 40 New York The MacMillan Company 1906

This is not a medical work, but is intended for students who have had a high school course in chemistry and to whom some knowledge of the applications of chemistry to the daily life of the household will be useful While primarily intended as a text book it includes material derived from government reports and elsewhere, so that it will prove valuable for general information and reference Some experiments are introduced which generally require simple apparatus The sanitary teachings of the book are generally correct The notion that sewer gas is a source of infection is corrected by the statement that sewer air has been found to contain fewer microbes than outside air! The statement that certain waters may convey malaria is liable to give rise to misapprehension, although offset by the statement that collections of water in shallow pools give opportunity for the breeding of mosquitoes that transmit the infection Some instructive examples of the dependence of epidemics on the nature of the water supply are given but the bacteriologic side of the subject receives rather scant notice in consideration of its importance

The very sensible remarks regarding cereal breakfast foods will tend to produce a more just estimate of the value of these "predigested" foods in relation to the cereals from which they are obtained The results of Atwater's experiments on alcohol are given due credit but the conclusion is reached that "although alcohol has some right to be regarded as a food, yet it is not a food of any practical importance" While the book is perhaps not sufficiently detailed for the use of the physician it may well be recommended to lay readers who desire to gain a knowledge of these important subjects

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Nevada State Board of Medical Examiners Carson City November 5 Secretary S L. Lee Carson City

Nebraska State Board of Health State House, Lincoln November 7-8 Secretary Geo H Brash Beatrice.

Maine Board of Registration in Medicine, Portland November 13 Secretary Wm J Maybury Saco

Connecticut Medical Examining Board City Hall New Haven November 13-14. Secretary Charles A. Tuttle, New Haven.

Massachusetts Board of Registration in Medicine, State House, Boston November 13-14 Secretary Edwin B Harvey State House

West Virginia State Board of Health The Frederick Huntington November 13 15 Secretary, H A Barbee Point Pleasant

Tennessee Secretary's Annual Report.—In Dr T J Happel's annual report to the State Board of Medical Examiners, he recommends some rules for conducting examinations, which will doubtless be of interest to all examining boards We abstract these rules briefly as follows

1 There should be a watcher or floor walker at every examination.
2. The examiners should be in the room constantly and free from other work than that of conducting the examination
3 Time allowances should be strictly followed
4 No applicant should be allowed to leave the room until he has completed his examination and handed in his paper and then not be allowed to return
5 Applicants should be seated as few as possible at each table, and no one be allowed to leave his seat during the examination
6. Give only one set of questions to any one applicant.
7 Questions for each subject should be in separate sealed packages to be opened in the examining room and then only as needed
8 No new set of questions should be given out to any applicant until all applicants have handed in the preceding set
9 No students or other parties not connected with the examination should be allowed in the room

The report favors the arrangement made by some states where a board of preliminary examiners must pass on the entrance credentials of prospective college students, and also recommends an amendment to the medical laws requiring graduation from a medical college having four years of seven months each, as a requirement for license, in addition to the passing of an examination The report also calls attention to the lack of graded courses of lectures in some medical colleges, the same lectures being delivered to all classes alike It is urged that this should never be, since first course students can not understand medical teachings adapted to the fourth year classes Students should always be required to be in actual attendance at the school from the time of its opening

Illinois May Report.—Dr J A Egan, secretary of the Illinois State Board of Health, reports the written examination held at Chicago, May 23 25, 1906 The number of subjects examined in was 16, total number of questions asked, 100 percentage required to pass, 75 The total number of candidates examined was 394, of whom 373 passed and 21 failed The following colleges were represented

PASSED

College	Year Grad.	Per Cent.
College of P & S Chicago (1906) the grade of 75 was reached by one 76 by three 77 by one, 78 by eleven 79 by twelve 80 by nineteen 81 by twenty 82 by seventeen 83 by twenty four 84 by seventeen, 85 by seven 86 by four 87 by one 88 by five and 89 and 93 by one each.		
Northwestern Univ Med School (1906) the grades of 76 77 and 78 were reached by one each 79 by seven 80 by ten 81 by three 82 by fifteen 83 by ten 84 by nine 85 by fourteen 86 by 6 87 by seven 88 by three 89 and 90 by five each and [illegible] by one		
Rush Med. Coll (1905) 88 (1906) the grades of 80 and 82 were reached by one each 83 and 84 by three each 85 by five 86 by four 87 by one 88 by four 89 by seven 90 by three 91 by two 9[illegible] by four and [illegible]4 by one		
Hahnemann Med. Coll Chicago (1906), the grade of 75 was reached by two 77 and 78 by one each 79 and 80 by three each 81 and 82 by two each 83 by four 84 by three 85 by one 86 by two and 89 by one		
Jenner Med. Coll (1906) the grades of 75 76 and 77 were reached by two each 78 and 79 by four each 80 by three 81 by two 8[illegible] by four and 8[illegible] by two		
Illinois Medical College (1906) the grades of 78 81 and 82 were reached by one each 84 by two 85 and 86 by one each and 87 by two		
American Coll of Med and Surg., Chicago	(1906)	80 8[illegible]
American Med Miss Coll	(1905) 80 81 (1906)	81 81 85
Bennett Med Coll	(1906)	76 7[illegible] 81
College of Med & Surg. Chicago	(1906)	76
Dearborn Med Coll	(1906)	7[illegible] 76 78 78 80 8[illegible]
National Med. Univ Chicago	(1906)	75 84
University of Iowa	(1906)	8[illegible]
Harvard Univ Med School	(1906)	82 83
Washington Univ St Louis	([illegible] 78 (1[illegible]	8[illegible]
Toledo Med Coll	(1[illegible]	[illegible]

College	Year	Per Cent.
Eclectic Med. Inst., Cincinnati	(1906)	79, 82
University of Toronto	(1905)	85
Queen s University, Kingston Ontario	(1906)	83
University of Strassburg, Germany	(1906)	83

FAILED

College	Year	Per Cent.
American Coll of Med & Surg, Chicago	(1905)	68
College of P & S Chicago	(1906)	66, 67 71 72 74
College of Med. & Surg, Chicago	(1906)	60, 66 68
Hahnemann Med Coll, Chicago	(1906)	63, 72
Hering Med. Coll	(1906)	65 68, 70
Illinois Med. Coll	(1905)	74
Jenner Med. Coll	(1906)	53 64, 73, 74
Northwestern Univ Med School	(1906)	70
Eclectic Med. Inst., Cincinnati	(1879)	63

Illinois Reciprocity Report.—Dr J A Egan, secretary of the Illinois State Board of Health, sends us a report of physicians licensed through reciprocity since the beginning of the year The following colleges were represented

College.	Year Grad.	Reciprocity with.
George Washington University	(1905)	Maryland
Rush Medical College	(1901)	Iowa
American Med. Miss. College	(1903)	Kansas
Hahnemann Medical College Chicago	(1905)	Iowa
College of P and S., Chicago	(1900)	Iowa
Keokuk Med. Coll. of P and S	(1900), (2 1901) (2 1903) (1905)	Iowa
University of Iowa	(1902), (1904), (3, 1905), (2, 1906)	Iowa
Medical Coll of Indiana	(1904)	Michigan
Medical Coll of Indiana	(1905)	Indiana
University of Kansas	(1906)	Kansas
University of Maryland	(1893)	Maryland
University of Missouri	(1904)	Wisconsin
Creighton Med. Coll	(1906)	Nebraska
University of Oregon	(1899)	Michigan
Laval University Montreal	(1897)	Michigan

Missouri April and August Reports—Dr J A B Adcock, secretary of the Missouri State Board of Health, reports the written examinations held at St Louis, April 10 12, 1906, and Aug 8 10, 1906 The number of subjects examined in was 12, total number of questions asked, 90, percentage required to pass, 75

At the April examination the total number of candidates examined was 214, of whom 188 passed, including 30 non-graduates, and 91 failed, including 21 non graduates The following colleges were represented

PASSED

College	Year Grad.	Per Cent.
Rush Med. Coll	(1899) 82 (1904)	80
College of P & S Chicago	(1906)	75 75
Northwestern Univ Med. School	(1904)	78
University of Iowa, Homeo Dept	(1894)	82
University of Kansas	(1906)	75 77, 78, 78 79 80, 83 85
University of Louisville	(1898)	75
St. Louis University (Marion Sims Beaumont Med. Coll.) (1905) 80, 84 (1906), the grade of 75 was reached by seventeen 76 by four 77 by five 78 by seven, 79 by five 80 and 81 by three each, 82 by one 83 by two and 84, 85 and 86 by one each.		
Barnes Med. Coll (1905) 75 (1906), the grade of 75 was reached by seven 76 by two 77 and 78 by one, and 79 by two		
Washington University (1905) 75 76 (1906) the grade of 75 was reached by four, 76 by one, 77 by two, 78 by six 79 by two, 80 by six, 81 by two 83 by five and 84 85 and 86 by one each		
American Med. Coll, St. Louis (1906) the grade of 75 was reached by three 78 by one and 79 by two		
College of P & S St. Louis (1906), the grade of 75 was reached by five, and 78 by one		
University of Missouri (1906) the grade of 75 was reached by three 77 and 78 by one each and 80 by two		
Eclectic Med. Univ, Kansas City	(1906)	75 75
University Med. Coll Kansas City (1906) the grade of 75 was reached by five 76 by one, 77 and 78 by two each 79 80 81, 82 and 84 by one each		
Ensworth Central Med. Coll (1906) the grade of 75 was reached by two 77 by one and 81 by two		
University of Buffalo	(1899)	75
University of Budapest Hungary*		75
University of Palermo Italy*		76

FAILED

College	Year Grad.	Per Cent.
University of Kansas	(1906)	65
Homeopathic Med. Coll of Missouri	(1905)	37
St. Louis University (Marion Sims Beaumont Med. Coll) (1906) the grades of 60 and 62 5 were reached by one each 65 by three 66 by two 66 5 and 67 by one each, 69 and 70 by two each and 71 by five		
College of P & S St. Louis (1897) 67 (1905) 57 61 71 (1906) 50 60 61 64 64 65.5 69 70 71		
Amer Med. Coll St Louis	(1906)	59 70
Barnes University (1904) 60 (1905) 64, (1906) 42.5 63 64 67 68 69 70 70 70 70 5 71 71		
Washington University	(1906)	71
University Med. Coll., Kansas City	(1906)	70
Eclectic Med. Univ., Kansas City	(1906)	56 5 61 63
Ensworth Central Med. Coll. (1905) 66 67 (1906) 57 62 64, 67 67 5 70 70 71		
Eclectic Med Inst. Cincinnati	(1905)	56
Memphis Hosp Med Coll	(1904) 72 (1906)	74
University of the South	(1905)	71
Wisconsin Coll of P & S	(1897)	70
Imperial Poo Chy Yuen China*		
Palermo University Italy*		

* Year of graduation not given

At the August examination the total number of candidates examined was 94, of whom 27 passed, including 6 non graduates, and 67 failed, including 8 non graduates The following colleges were represented

College	Year	Per Cent.
Jefferson Med. Coll	(1899)	75
University of Pennsylvania	(1896)	75
Vanderbilt University	(1872) 75, (1906)	82
Wisconsin Coll. of P & S	(1897)	75
University of Athens Greece	(1889)	75

PASSED

College	Year Grad.	Per Cent.
Hahnemann Med. Coll, Chicago	(1905)	75
Rush Med. Coll	(1903)	88
University of Louisville	(1906)	76
Tufts Coll. Med. School	(1903)	77, 82
Coll. of P & S St. Louis	(1897) 75, (1906)	75
Barnes Med Coll	(1906)	75, 75, 78
Washington University	(1905) 82 88 (1906)	75, 75
St. Louis University (Marion Sims-Beaumont Med. Coll)	(1906)	88

FAILED

College	Year Grad.	Per Cent.
Hahnemann Med Coll, Chicago	(1888)	75
Keokuk Med Coll, Coll of P & S	(1906)	64, 66
University of Kansas	(1906)	56
University of Louisville	(1894)	66
Eclectic Med. Univ, Kansas City	(1906)	48, 55
Barnes Med. Coll (1895) 72, (1906) 56, 59 60, 65, 66 66, 68, 71, 73, 73		
St. Louis University (Marion Sims Beaumont Med Coll), (1906) 48, 54 59 61, 66 67, 67, 68 68, 68, 69 69, 70 70, 70 72, 73		
Washington University	(1906)	64, 68, 73
Ensworth Central Med. Coll	(1905) 64 (1906)	47 57
Coll of P & S, St. Louis (1905) 37, 58 (1906) 47, 51, 59, 65, 65, 69, 70 73		
American Med Coll, St. Louis	((1906)	68
University of Nashville	(1906)	58
University of the South	(1900)	68
Meharry Med. Coll	(1905) 64 (1906)	59 59 68, 68

The following questions were asked at the August examination

ANATOMY

1 Give description with points of ossification of (a) parietal, (b) frontal (c) occipital bones and (d) femur 2. Describe superficial and deep palmar arch brachial artery branches and relationship 3 Describe brachial plexus and great sciatic nerve 4 Describe the portal circulation 5 Name flexor muscles of hand extensor muscles of same 6 Describe Scarpa s triangle popliteal space. 7 Describe (a) superior longitudinal sinus, (b) lateral sinus (c) torcular herophili 8 Give short description of pericardium 9 Give short description of pleura. 10 Give anatomy of kidney

CHEMISTRY

1 (a) Give specific gravity of albuminated urine (b) Also two tests for albumin in the urine. 2. (a) What are the antidotes for bichlorid of mercury? (b) Treatment (chemically) of poisoning from same. 3 Give properties of nitrous oxid or laughing gas" 4 What is the chemical composition of pancreatic juice? 5 Give chemical characteristics of hydrate of chloral?

PHYSIOLOGY

1 Give steps in the digestion of piece of buttered bread 2 What effect does diet have on the secretion and constituents of milk? 3 (a) Give function of thyroid body, (b) What effect does its removal have? 4 Define metabolism 5 What are some of the important characteristics of enzymes? 6 (a) What are leucocytes? (b) Give their functions in the normal body 7 Locate and give function of cardio-inhibitory center, and cardio-augmenter center 8 (a) Give brief description of secretion of urine (b) On what does the quantity secreted depend? 9 What is diaphragmatic what costal respiration? Give examples 10 Describe the pneumogastric nerve and give function of same

PATHOLOGY

1 Discuss cell division and growth 2 Discuss hereditary predisposition 3 Give the pathology in contracted kidney 4 What is a tumor? Give brief discussion of this formation 5 Discuss (a) caseation, (b) calcification.

BACTERIOLOGY

1 What is infection? What is immunity? Through what agencies may the body protect itself from the consequences of infection? 2. Name the common pyogenic micro-organisms and describe the microscopic appearance and the behavior of the staphylococcus pyogenes aureus in osteomyelitis 3 What is meant by an antitoxin? What is serum therapy? Illustrate by two diseases conditions in which it is successfully employed 4 Describe in detail Widal s test in typhoid fever and explain the principle on which it is based 5 Give (a) The characters of the tetanus bacillus (b) How does it induce its effects? (c) On what theory is tetanus antitoxin administered?

PRACTICE.

1 Give etiology, symptoms, and treatment in following diseases Pyelitis 2 Acute ascending (Landry s) paralysis 3 pneumothorax 4 Dilatation of the heart. 5 How would you diagnose cerebral hemorrhage? 6. Give treatment and general management in such case 7 What are the most reliable signs of death 8 What is meant by sympathetic disturbance? Give an example 9 Discuss autoinfection 10 Give symptoms and treatment of Grave s or Basedow s disease.

SURGERY

1 Give in detail the treatment of a recent open fracture of the tibia. 2 What are the symptoms of a subglenoid dislocation of the humerus? Describe the steps in its reduction by manipulation, and mention the dangers which may be connected with the reduction 3 Given a wound of the scalp what investigation of the wound is necessary? Describe in detail the surgical treatment. 4 What are the symptoms and what is the treatment of a gunshot wound of the kidney? 5 Give and explain the symptoms of a

strangulated inguinal hernia? 6 How would you differentiate between a fracture at the neck of the femur without impaction and a dislocation? Give Bryant s and Nélaton s lines for making the measurements. 7 Detail the clinical symptoms and the surgical treatment of an empyema 8 What are the clinical symptoms and what is the surgical treatment of a purulent effusion into the kneejoint? 9 Describe the different avenues through which the urinary bladder in the male may be emptied surgically 10 Give the differential diagnosis between an aneurism of the popliteal artery and an abscess in the popliteal space.

OBSTETRICS

1 Give diagnosis prognosis and treatment of placenta prævia. 2 Give diagnosis prognosis and treatment of puerperal eclampsia. 3 Describe normal labor in L. O A. presentation. Give care of mother before, during and after labor 4 Describe asphyxia neonatorum Give forms and treatment. 5 Give different presentations that may be met in obstetrical practice. Differentiate a foot from a hand presentation knee from elbow Give treatment of each 6. What is the bag of waters? What is its function during pregnancy? During labor? 7 How would you diagnose pregnancy at the third month fifth month full term? 8 How diagnose hour glass contraction with retained placenta Give treatment. 9 Define involution Define subinvolution. Give cause and treatment of same. 10 After the fifth month how may death of fetus *in utero* be recognized? What should be done?

GYNECOLOGY

1 What is salpingitis? Give causes, pathology and treatment. 2 When should the uterine cavity be curetted? What are the dangers to be avoided? 3 Diagnose simple from gonorrheal vaginitis Give treatment of each 4 Define amenorrhea dysmenorrhea, menorrhagia and leucorrhea. Give probable cause of each. 5 What is the difference between anteversion retroversion and prolapsus of the uterus? To what extent does each influence the pregnant uterus?

MEDICAL JURISPRUDENCE.

1 What is tyrotoxicon and in what found? 2 What are ptomains and in what found? 3 What is insanity? 4 Give different forms of insanity 5 Give appearance of gunshot wound at entrance and at exit.

THERAPEUTICS

1 Give therapeutic action of aconite 2 Give therapeutic action of belladonna 3 Give therapeutic action of digitalis 4 Give therapeutic action of nux vomica 5 Give therapeutic action of opium 6 Give therapeutic action of veratrum 7 Give therapeutic action of mercury 8 Give medical treatment of measles 9 Give medical treatment of scarlet fever 10 Give medical treatment of diarrhea

HYGIENE

1 What precautions are necessary and what is length of quarantine of (a) variola (b) scarlatina (c) diphtheria (d) yellow fever 2. (a) Give composition of milk (b) how sterilized, (c) how peptonized (d) how modified, (e) why is it necessary to modify milk for infant feeding? 3 Give per cent. of (a) oxygen (b) nitrogen (in air), (c) what effect has burning lamp (or gas) on atmosphere? (d) Mention deleterious substances existing in sewer gas 4 (a) How much water per day, in ounces should be consumed by an average adult? (b) Mention most frequent pollution of water (c) Give test for organic matter in same 5 (a) Give general outline for disinfection and fumigation (b) and comparative value of the following (1) formaldehyd, (2) sulphur (3) chlorin

Nevada May and August Reports—Dr S L. Lee, secretary of the Nevada State Board of Medical Examiners, reports that no applicants were examined at either of these meetings, but that 86 applicants were registered on presentation of satisfactory credentials The following colleges were represented

MAY MEETING

College	Year Grad
College of P and S San Francisco	(1898), (1900) (2 1902) (2 1005)
California Med Coll	(1903) (2, 1905)
University of California	(1808) (1902)
Cooper Med. Coll	(1892)
Denver Homeo Med Coll	(1904)
Bennett Med. Coll	(1900)
Hahnemann Med. Coll Chicago	(1905)
Jenner Med Coll	(1903) (1905)
Central Coll of P and S Indianapolis	(1901)
Medical Coll of Indiana	(1903)
Hospital Coll of Med. Louisville	(1901)
Louisville Med. Coll	(1905)
University of Maryland	(1905)
Baltimore Med. Coll	(1904)
College of P and S., Baltimore	(1903)
Saginaw Valley Med Coll	(1903)
University of Michigan	(1896) (1808)
College of P and S Minneapolis	(1880)
University Med Coll Kansas City Mo	(1904)
University of Buffalo	(1887)
Bellevue Hosp Med Coll	(1899)
Long Island Coll Hosp	(1883)
College of P and S New York	(1879) (1890)
Willamette University	(1870)
Western Pennsylvania Med Coll	(1897) (1901)
Jefferson Med Coll	(1891)
Medico Chirurgical Coll Philadelphia	(1905)

AUGUST MEETING

College	Year Grad
California Med Coll	(1894) (1904) (5 1906)
University of California	(1902) (1905)
College of P and S San Francisco	(9 1906)
Cooper Med Coll	(1889) (1897) (1901) (1902) (1905) (1906)
Denver and Cross Med Coll	(1904) (1905)
American Med Miss Coll	(1900)
Hahnemann Med Coll Chicago	(1901)
College of P and S Chicago	(1905)
Rush Med. Coll	(1889)
College of P and S, Kansas City, Kan.	(1901) (1904)
Tulane University	(1887)
College of P and S Baltimore	(1905)
Baltimore Med. Coll	(1906)
Boston University	(1888)
Harvard Med. School	(1894)
University Med. Coll, Kansas City, Mo	(1905)
Ensworth Med. Coll	(1890)
Barnes Med. Coll.	(1896), (1900)
University of Nebraska	(1905)
Willamette University	(2 1906)
Jefferson Med. Coll.	(1877)
Memphis Hosp Med. Coll	(1904)
Fort Worth University	(1906)

Arizona July Report.—Dr Ancil Martin, secretary of the Board of Medical Examiners of Arizona, reports the written examination, held at Phoenix, July 2 3, 1906 The number of subjects examined in was 9, total number of questions asked, 90, percentage required to pass, 75 The total number of candidates examined was 9, all of whom passed The following colleges were represented

PASSED

College		Year Grad	Per Cent.
University of Southern California	(1899) 83	(1904)	75 5
Sioux City Coll of Med.			*91 7
Harvard Med. School		(1894)	81
University of Michigan		(1906)	83 2
Long Island Coll Hosp		(1905)	80 3
Cleveland Homeo Med. Coll		(1906)	81 9
Med. Coll. of Virginia	(1905) 85	(1906)	85 5

* Year of graduation not given

New York Reciprocates with Ohio—We learn from Dr Howard J Rogers, commissioner of education of New York, that reciprocal relations have been satisfactorily arranged between that state and Ohio New York now reciprocates, therefore, on the basis of an examination, with New Jersey, Michigan and Ohio

Nebraska Statistics for 1905—We learn from Dr George H Brash, secretary of the Nebraska State Board of Health, that we failed to receive the report of one examination given by that board in 1905 and, therefore, failed to include it in the statistics published in our Educational Number, Aug 25, 1906 The corrected statistics of Nebraska colleges, therefore, are as follows

GRADUATES OF NEBRASKA COLLEGES EXAMINED BY STATE BOARDS OF REGISTRATION DURING 1905

Nebraska Colleges	Total Examined	Passed	Failed	Percentage Failed	No of States Examining
University of Nebraska—R	45	36	9	20 0	9
Creighton Medical Coll—R	41	36	5	12.2	10
Lincoln Medical College—E	22	16	6	27 8	4

Increased Entrance Requirements.—Since the weakest part of medical education in the United States is the low requirements of preliminary education the announced increase in entrance requirements by a number of medical colleges is decidedly encouraging The tendency seems to point toward a preliminary requirement by the university medical schools of two years in a college of liberal arts, and toward furnishing the opportunity whereby medical students may secure the degrees of B S and M D in six years Is it possible that eventually the fundamental branches included in the first two years of the medical course will be given entirely in universities, in the last two years for the B S degree, and by instructors who devote their entire time to teaching, leaving to the medical schools the remaining two (or three) years devoted to the clinical branches? Be that as it may, with the large number of colleges which offer abundant opportunities to any one who has ambition enough to secure a liberal education regardless of his financial condition, there is no longer any excuse for adhering to the present ridiculously low minimum standards of entrance requirements In our Educational Number (Aug 25, 1906), we mentioned nine medical schools requiring for admission one or more years in a college of liberal arts Seven of these require two or more years Twelve other colleges were mentioned as having announced increased requirements to become effective at a later date To be added to this group is the Medical Department of the University of Nebraska, which intends to increase its preliminary requirements to one year in a college of arts on or before Jan 1, 1909

The faculties of the Medical College of Ohio, Cincinnati, and of the American Medical Missionary College Chicago announce that after Jan 1 1910 they will require in addition to a four year high school education a preliminary year to be devoted to physics, chemistry, biology and languages

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice Proper inquiries concerning general formulæ and outlines of treatment are answered in these columns]

Infantile Diarrhea

The intestinal lesion in this condition is generally a superficial catarrhal inflammation involving the mucous membrane of the stomach, and of the small and large intestines, according to the *Practitioner*, and is brought about by putrefactive changes in the alimentary tract Absorption of the toxic substance then takes place and produces the severe symptoms and perhaps collapse In severe infections gross lesions may occur in the lower portion of the ileum and in the colon The most frequent etiologic factors in the production of such diarrheas in children are as follows

1 Errors in diet which are liable to cause acute dyspepsia

2 Certain predisposing causes, such as irregularity in feeding of children, bad hygienic surroundings, delicate children with low resisting powers, tender age

3 Hot weather

The treatment of such diarrheas should be considered under two headings 1, Prophylactic, 2, curative

The prophylaxis, according to Holt, consists in sending infants to the country The laity should be educated to the importance of proper rules of feeding the dangers of overfeeding, and the importance of a proper diet for a child who has just been weaned

The sale and transportation of milk should be placed under legal regulations The milk of the poor should be sterilized during the summer All bottles, spoons, nipples and teething rings should be properly sterilized

In the treatment of a case of infantile diarrhea the first thing to be done is to correct all bad hygienic surroundings The child's diet must be carefully restricted or food withheld entirely for a short time Thirst must be relieved by bland fluids, given frequently and in small amounts Water may be freely allowed unless vomiting is present Barley water albumin water, whey, veal and chicken broth may be substituted for milk, but they must be given in small quantities and a careful watch must be kept on the child's stools

If vomiting persists, it is a good plan to administer copious draughts of cold water, previously boiled This will be readily taken and may be almost immediately vomited This will cleanse the stomach and is a fair substitute for lavage The contents of the small intestine should then be thoroughly cleansed by the administration of castor oil, given to a child one year old in two dram (8 00) doses In this way the entire intestinal tract will be cleared out and according to the author will cause no griping, while its after-effects are soothing Castor oil, however can not be well borne if the stomach is in a state of irritation as it is very liable to increase the irritation In such instances calomel should be given in one-quarter grain doses (015) every hour up to six doses, or until the usual green stools appear Intestinal antiseptics may be tried such as salol in one or two grain doses (06 12) given every two or three hours or resorcin in one grain (06) doses every two or three hours but both are liable to cause some irritation of the infant's stomach and cause the vomiting to recur

In severe cases, stimulants such as brandy may be required A child one year of age may take an ounce of brandy in the twenty four hours It should always be well diluted with water eight or ten parts and given in small quantities at frequent intervals This may be followed by a saline purge such as tartarized soda magnesium sulphate or magnesium citrate

The following combination is of value

℞	Magnesii carb	gr iii		20
	Magnesii sulph	gr x		65
	Spts chloroformi	m iii		20
	Aquæ menth pip q s ad	fʒi	4	

M Fiat mistura Sig · To be taken at one dose Or

℞	Tinct rhei	m vii		50
	Magnesii sulph	gr vi		40
	Syr zingiberis	m v		30
	Aquæ fœniculi q s ad	fʒi	4	

M Fiat mistura Sig At one dose

If fresh signs or symptoms of intoxication arise, such as may be indicated by a rise of temperature and a rapid pulse with great prostration, the foregoing treatment must be repeated According to Holt, irrigation of the bowels is advisable in all cases, as it hastens the effect of the cathartic and assists in removing the offensive contents which accumulate in the lower bowel A long rectal tube should be used and a normal saline solution should be injected into the bowel at a temperature of 100 F

If the stomach is irritable, champagne is preferable for older children and must be similarly administered, but in small amounts

Mercury in Syphilis

Corrosive sublimate, according to Stevens in his "Therapeutics," is a reliable salt of mercury, though somewhat more irritant than the protiodid He recommends its administered in the pill form or in solution, given in doses of grain 1/20 each (003) and gradually increased to grain 1/12 (005) three times a day after food. He state that the addition of a small amount of opium usually serves to allay any gastric or intestinal irritation Late in the secondary stage it may be combined with potassium iodid as follows

℞	Hydrargyri chloridi corros	gr iss ii		09 12
	Potassii iodidi	ʒiv vi	15 25	
	Syr sarsap co	f℥iss	45	
	Aquæ q s ad	f℥iii	90	

M Sig One teaspoonful in water after meals

Hypodermically the corrosive sublimate is one of the best preparations of mercury to employ Sodium chlorid should be added to the solution, according to Stevens, to prevent the formation in the tissues of an insoluble albuminate They may be combined as follows

℞	Hydrarg chloridi corros	gr vi		40
	Sodii chloridi	gr xl	2	65
	Aquæ dest	f℥i	30	

M Sig From 10 to 20 minims to be injected once daily into the tissues.

[The best location for injection is deep into the muscles of the gluteal region, selecting a new site for each injection —ED]

Other combinations of mercury to be used in the treatment of syphilis are recommended by the "Cyclopedia of Medicine and Surgery" as follows

℞	Hydrarg chloridi corros	gr ii		12
	Pulv opii	gr viii		50
	Ext guaiaci	ʒss	2	

M Fiant pillulæ No xxiv Sig One pill three times a day Or

℞	Hydrarg bichloridi	gr i		06
	Tinct rhei			
	Tinct cinchonæ, āā	℥i	30	

M Sig One teaspoonful twice a day Or

℞	Hydrarg biniodidi	gr i		06
	Potassii iodidi	ʒii	8	
	Aquæ menth pip q s ad	f℥iii	90	

M Sig One teaspoonful after each meal

Acute Pharyngitis

In the treatment of acute pharyngitis the same authority recommends that the patient be put to bed and an initial dose of calomel grain 1/6 (01) given every hour for six or eight doses followed by a saline purge A hot mustard footbath is also recommended.

The following combination is advised internally

℞	Tinct aconiti	m xv	1
	Sol potassii citratis	f℥ii	60
	Elix aromatici	fʒiv	25
	Aquæ camphoræ q s ad	f℥iv	120

M Sig One tablespoonful every three hours

If much edema be present the following combination is of value

℞	Tinct opii	fʒi	4	
	Tinct belladonnæ	m xv	1	
	Aquæ camphoræ q s ad	f℥iv	120	

M Sig One tablespoonful every three or four hours

If there is a rheumatic tendency, sodium salicylate should be given in 10 (65) grain doses, as necessary

Locally small pieces of ice may be taken into the mouth every two or three hours and the following combination applied locally

℞	Mentholis	gr vi		40
	Olei amygdalæ	fʒii	8	

M Sig Apply locally on a swab every three hours

Gonorrhea.

Robinson, in *Amer Jour Clinical Medicine*, recommends the following combinations as astringent injections after the disappearance of the gonococci, in the treatment of gonorrhea

℞	Zinci sulphatis	gr viii		50
	Aquæ dest	f℥iv	120	

M Fiat solutio Sig Use as an injection four times daily Or

℞	Zinci sulphatis	gr viii		50
	Plumbi acetatis	gr viii		50
	Aquæ dest	f℥iv	120	

M Sig Use as an injection three or four times a day

The following combination is recommended by Potter as an injection after the acute symptoms have subsided

℞	Zinci sulphatis	gr viii		50
	Plumbi acetatis	gr x		65
	Ammonii chloridi	gr x		65
	Aluminis	gr x		65
	Aquæ rosæ	f℥iv	120	

M Sig Use as an injection Or

℞	Resorcinol	ʒss	2	
	Acidi borici	gr xx	1	30
	Zinci sulphatis	gr x		65
	Aquæ dest	f℥iv	120	

M Sig Use as an injection three times a day Or

℞	Zinci sulphatis			
	Plumbi acetatis, āā	gr viii		50
	Tincturæ opii	fʒi	4	
	Tinct catechu	fʒii	8	
	Aquæ dest q s ad	f℥iv	120	

M Sig Use as an injection three times a day Or

℞	Zinci sulphatis	gr iv viii		25 .50
	Bismuthi subcarb	ʒiii	12	
	Bismuthi subgal	ʒi	4	
	Sol hydrastis aq	f℥i	30	
	Pulv acaciæ	ʒiss	6	
	Aquæ dest q s ad	f℥iv	120	

M Sig Shake well before using and inject three times a day

Medicolegal

Validity of Law Authorizing Revocation of Certificate for Advertising Relative to Venereal Diseases

The Supreme Court of Michigan had before it in the case of Kennedy vs the State Board of Registration in Medicine the question of the constitutionality of the state law authorizing the board to revoke a physician's certificate for the insertion in a newspaper of an advertisement relative to venereal diseases Subdivision 6 of section 3 of No 237 of the Public Acts of Michigan of 1899, as amended in 1903 provides "The board of registration in medicine shall refuse to issue a certificate of registration provided for in this section to any person guilty of grossly unprofessional and dishonest conduct of a character likely to deceive the public, and said board shall, after due notice and hearing, revoke a certificate issued subsequent to the date of the passage of this act or subsequent to the date of the passage of Act No 237 of the Public Acts of 1899, for like cause or for offenses involving moral turpitude. And provided further after the passage of this act, the board may at its discretion revoke the certificate of registration, after due notice and hearing of any registered practitioner who inserts any advertisement in any newspaper, pamphlet, circular, or other written or printed paper, relative to venereal diseases or other matter of any obscene or offensive nature derogatory to good morals"

The court says that in support of his contention that this section was unconstitutional, the complainant cited several cases Matthews vs Murphy (Ky), 63 S W Rep 785, ex parte McNulty, 77 Cal. 164, Hewitt vs the Board of Medical Examiners (Cal Sup), 84 Pac. Rep 39 The strongest and best reasoned of these cases was Matthews vs Murphy That case alone would receive consideration because the grounds on which it was held inapplicable made all the others inapplicable. In that case it was held that a statute giving the State Board of Health authority to revoke a certificate to practice medicine on proof that the holder was guilty of "grossly unprofessional conduct of a character likely to deceive or defraud the public" was unconstitutional on the ground that the statute did not advise the physician "in advance what act or acts may be in violation of its provisions He might do an act which he regarded as entirely proper, which neither violated moral law nor involved turpitude, still such acts might, in the opinion of the State Board of Health, amount to unprofessional conduct, and which in its opinion did or was calculated to deceive or defraud the public. The legislature in effect has attempted to commit to the State Board of Health the right, after the physician has done some act, to determine what its effect is to be, and, if in its judgment he should be deprived of the right to practice his profession, it can inflict the punishment on him by revoking his license" This reasoning presented no argument for declaring unconstitutional that part of subdivision 6, under which the defendants were proceeding to try the complainant, viz., that giving them authority to revoke his certificate because he inserted an advertisement in a newspaper relative to venereal diseases Indeed, in deciding Matthews vs Murphy, the court recognizes the constitutionality of such a law This is shown by the following quotation from its opinion, viz "If the legislature desires to declare for what acts or conduct a physician's license to practice medicine shall be revoked it is competent to do so, and to vest in some tribunal authority to investigate and try the charge which may be made under such a statute" What the Supreme Court of Michigan would have decided had the constitutionality of the first part of subdivision 6 been necessary to be decided it does not intimate, unless such intimation may be found in the above remarks

But, further, as to the law which authorized the defendants to revoke the complainant's certificate on the ground that he inserted an advertisement relative to venereal diseases in a newspaper, the court says that it might fairly be stated that all of the many reasons which he advanced in support of the contention that it was unconstitutional rested on the assumption that the revocation of that certificate was an exercise of judicial power, and that all of his objections to the constitutionality of the law were completely answered by saying that this assumption was unfounded This was shown so clearly by the opinion of the Supreme Court of Minnesota in State vs Board of Medical Examiners, 34 Minn 389, that the argument in that opinion is made a part of this And this doctrine is supported by other authorities See Meffert vs State Board of Medical Registration, 66 Kan 710, State vs Webster, 150 Ind 607, Dent vs West Virginia, 129 U S 114, and, so far as the court has been able to discover, there is no authority against it

Nor does the court consider that the statute in question violates the rule that a statute can not deprive one of the right to seek redress in a court for the invasion of a constitutional right It says that if this statute is observed *no one* will be deprived of a constitutional right and in that case a provision for an appeal to a court is not essential If through non observance of the statute the complainant or any other physician is deprived of a constitutio [illegible] ght, th [illegible] therein which prevents his obt [illegible] te [illegible] court.

Mental Infirmity Not Proved by Tendency to It

The Court of Appeals of Maryland says, in the will case of Horner vs Buckingham, that evidence that a person has a disease which may or must eventuate in mental disease can not prove, or standing alone tend to prove, that at a given point of time he is actually so afflicted The tendency to mental infirmity can not *per se* prove the infirmity It must be shown by facts If a person has always shown through many years a high degree of mental soundness, in fact through his entire life, a jury ought not to be permitted to pronounce him insane merely because a medical expert can be found who will testify that he is affected with a disease that may eventually produce insanity, without other facts being shown that tend to prove that his speech or conduct is such as reasonably warrants the conclusion that such point has actually been reached.

Right of Executors to Allow Physician's Bill

The Second Appellate Division of the Supreme Court of New York holds, in re Title Guaranty and Trust Company and others, where there was an estate consisting of several millions of dollars' worth of real and personal property and a physician's bill amounting to $4,000, that it was error in the surrogate to cut the bill in two It says that the physician who treated the testator in his last illness devoted his entire time to that labor, and testified that the amount which he charged for his services was fair and reasonable The executors paid him in that belief, and there was no reason whatever to believe but that in doing so they considered that they were acting in the best interests of the estate Nor was anything to be found in the record to indicate that, had the bill been rejected and a lawsuit followed, the estate would have been any better off financially The question was not whether the services of the physician should have been rendered for less It was whether the executors exercised their honest judgment in believing it to be a proper claim and in paying it Even if they erred in judgment, that fact alone would not make them personally liable

Intent and Requirements as to Physical Examinations.

The Appellate Division, Second Department, of the Supreme Court of New York says, in the personal injury case of Goldenberg vs Zirinsky, brought by a non resident, that while it entertains no doubt of the power of the court to compel the plaintiff to submit to a physical examination under the terms prescribed in the Code of Civil Procedure, this is an encroachment on the common law rights of litigants, and it should not be extended beyond the exact limits fixed by the statute, and all of its requirements should be observed There is no inherent power in the court to direct a physical examination The power is derived wholly from the statute, and as the purpose of the examination is that the evidence may be taken by physicians or surgeons designated by the court and made available for either or both parties to the action, it is entirely reasonable that the order should be served on the party who is called on to act The court never acquired any jurisdiction by an order served on the plaintiff's attorney

Furthermore, the court says that the order in question in permitting the defendant to have his own medical adviser present, even though a like privilege was accorded the plaintiff, was enlarging the scope of the statute It was not intended that such physical examination should be accorded to an adverse party for the purpose of enabling him to discover the weak points and to ignore the strong ones The intent was to have an examination by physicians or surgeons designated by the court, owing no obligations to the parties, the evidence so brought ought to be available to either party The defendant, by demanding a physical examination, under the fair intent of the statute, takes the risk of producing evidence which will be detrimental to him through the discoveries of disinterested witnesses, and the provisions of section 873 of the Code of Civil Procedure that "such examination shall be had and made under such restrictions and directions as to the court or judge shall seem proper," does not authorize the admission to such examination of the physicians of one or both of the parties

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York.

October 13

1 *Bath Treatment of Typhoid Fever in Private Practice. S Baruch New York
2 *Pathogenesis and Therapeutics of Cancer R Bell, London, England.
3 *Operative Treatment of Acute Gonorrheal Epididymitis F R. Hagner, Washington D C
4 Effects of Absinthe. E E Walker New York.
5 *Roentgenography of the Stomach M. Einhorn and L. G Cole, New York.
6 *Three Cases of Pott s Disease and one Case of Coxalgia Occurring in Adults and Presenting Unique Features J T Rugh, Philadelphia.

1 **Bath Treatment of Typhoid in Private Practice.**—Baruch declares that in the management of a case of typhoid fever the chief aim of the physician should be the enhancement of the patient's resisting capacity to the toxemia which threatens his life The damage sustained by the nerve centers is the measure by which the mildness or severity of a case of typhoid fever is gauged Cold baths must not be regarded as cooling procedures Cold baths prevent lethal complications by reason of their sustaining effects on the central nervous and circulatory systems The form of the bath and its temperature must be adapted to the condition of the patient

2 **Pathogenesis and Therapeutics of Cancer**—Bell believes that cancer is a disease independent of any specific agent from without From his point of view, if a person is a gross feeder, especially if he indulges in an excessive amount of animal food, and if there is present a constipated habit which has a pernicious effect on the thyroid gland, it may be concluded that there exist the three most important factors whose combined influence is sufficient to provoke a tendency to cancer

3 **Operative Treatment of Acute Gonorrheal Epididymitis.**—Hagner has had excellent results with the open method of treating gonorrheal epididymitis It is a rational procedure The danger to the patient is slight The infiltration of the epididymis disappears more rapidly under the operative treatment than under any other The danger of permanent injury to the testicle and epididymis is lessened The patients are absolutely relieved of pain on recovery from the anesthetic. The systemic symptoms are promptly relieved

5 **Roentgenography of Stomach**—Einhorn and Cole have examined a considerable number of patients with the *x* rays and are convinced that this method is an excellent one When the stomach is entirely or partly empty, the patient is given a pint of milk into which one ounce of subnitrate of bismuth has been suspended by thorough mixing The patient is then at once skiagraphed in a standing or recumbent posture The time of exposure is usually ten or fifteen seconds An investigation of the colon, by exposing the patient to the rays a second time on the day following, may be made By this proceeding no instrument is introduced into the stomach

6 **Pott's Disease and Coxalgia.**—The interesting features of the first case cited by Rugh are the development of a primary tuberculosis of the spine in a woman 70 years old, with no apparent causative history, and the early and rapid onset of paralytic symptoms even before the appearance of the knuckle in the spine The second patient is a man 50 years old The primary focus of disease was in the testicle, while there was secondary infection of the spine and kidney The third patient is a man 37 years old The onset of the disease was extremely slow in spite of heavy work constantly performed, and in the absence of all mechanical treatment The case of coxalgia reported illustrates the impossibility of pronouncing a case of tuberculosis cured.

New York Medical Journal.

October 13

7 *Reciprocity in Medical License R A. Vander Veer, Albany, N Y
8 Advances in the Surgery of the Nervous System Considered from the Standpoint of the Neurologist. T H Weisenburg Philadelphia.

9 Recent Advances in Laryngology and Rhinology C H Knight, New York.
10 Local Anesthesia in the Operative Treatment of Anorectal Diseases S G Gant, New York
11 *Preliminary Report on the Use of X rays in Neuritis J H Comroe, York, Pa.
12 Medical Complications and Treatment of Pneumonia A. C Morgan Philadelphia.
13 *Hydrotherapeutic Treatment of Chronic Rheumatism J J Levy Syracuse N Y
14 Urethral Diverticula and Cul de-sacs. N E Aronstamm Detroit.

7 **Reciprocity in Licensure**—Vander Veer describes the methods employed by the New York Board of Regents for establishing reciprocity in medical licensure

11 **X-Rays in Neuritis**—Comroe has employed the *x* rays in selected cases of neuritis in which the cause has been removed either partially or wholly and which thereafter resisted all modes of hygienic, therapeutic, dietetic and hydrotherapeutic treatments Six cases are reported Comroe insists that 1 The *x* ray should be employed in the treatment of neuritis only after all other judicious methods of therapy have failed 2 The exposure should be directed over as wide an area as may be safe, and frequently repeated in the beginning 3 The strength of the current and duration of the exposures should, as a rule, be in direct ratio to the approximate distance of the affected nerve structures from the cutaneous surface overlying them *Idiosyncrasies must be carefully sought* 4 Relief, if obtained, usually makes its appearance early in the treatment 5 Obstinate cases should receive "tonic" treatment with a medium tube for some time after the patient has been apparently cured so as to further assure permanency

13 **Hydrotherapeutic Treatment of Chronic Rheumatism.**—The treatment employed by Levy may be summed up as follows The patient is given an electric light bath, temperature 150 F, duration 20 minutes, to be followed by a circular douche 90 F, duration one minute, this is followed by a Scotch douche to the affected joints, and this in turn is followed by a general massage with special attention to the affected joints or muscles Three treatments a week are usually sufficient for these cases

Boston Medical and Surgical Journal.

October 11

15 *Acute and Chronic Indigestion J B Deaver Boston.
16 *Observations in One Thousand Adenoid Operations F B Sprague Providence, R. I
17 Killian's Operations. H P Mosher Boston
18 Hysteria from the Point of View of Dissociated Personality M Prince Boston.

15 **Acute and Chronic Indigestion.**—Deaver states that most cases of acute dyspepsia are undeniably medical Most cases of chronic dyspepsia can now be relieved by surgical means Therefore, a correct diagnosis is the essential prerequisite to successful treatment Careful physical examination of the abdomen and other regions of the body, and a reliable history of the patient, are of much more value than chemical examination

16 **One Thousand Adenoid Operations.**—These 1,000 cases reported by Sprague were about equally divided among the two sexes, there being 503 male and 497 female The age limit ranged from six months to 37 years The largest number at any one age was 64 patients at 8 years of age Dividing the age limit into periods of seven years each, about 30 per cent were during the first seven years, 50 per cent during the second seven years, and 20 per cent during the third period of seven years, there being only 28 patients over 21 years of age, 13 of these being over 30 years old In 905 cases, or about 90 per cent the adenoids were associated with hypertrophy of the faucial tonsil, some with but a slight degree of hypertrophy, and others enormously enlarged In these cases there was also more or less hypertrophy of the whole pharyngeal lymphoid ring The remaining 95 patients had the hyperplasia of the nasopharyngeal adenoids alone Investigation as to the cause of the trouble did not lead to very satisfactory results Five cases were dated to attacks of diphtheria, five to whooping cough, seven to measles five to scarlet fever, one to mumps, and while the diseases of childhood undoubtedly help in the causation of this hyperplastic lymphoid condition, the data are so incomplete and negative and so many children have enormous growths who never had any of the exanthemata that their importance in the etiology of the growth is not great All but two patients of this series were operated on under ether anesthesia A few anesthetics were started with nitrous oxid gas On the whole, Sprague thinks that clear ether is better, as the adenoid patients always require more ether than others, and it is necessary to have the system saturated with it before beginning the operation Sprague was called on to operate the second time in only two instances He describes his technic in detail

St. Louis Medical Review

October 6

19 Résumé of Pathologic Physiology of the Abdominal Visceral Tracts B Robinson Chicago
20 Acute Autointoxication from Fecal Stasis W F Waugh Chicago

October 13

21 Uncinariasis (Hook worm Disease) Its Relation to Grave Anemia L. M Warfield St. Louis

Lancet-Clinic, Cincinnati

October 13

22 The Rôle of Heredity in Reducing Degeneracy in Man to the Minimum R. C S. Reed Stockton Ohio

American Journal of Medical Sciences, Philadelphia

September

23 Toxemic Vomiting of Pregnancy J W Williams Baltimore.
24 *Elephantiasis Nervorum of the Scalp, A Manifestation of von Recklinghausen's Disease. H F Helmholz, and H Cushing Baltimore
25 *Graphic Methods in the Study of Cardiac Diseases A. D Hirschfelder Baltimore.
26 *Insufficiency of the Tricuspid Valve in the Course of Pernicious Anemia R B Preble Chicago
27 *Elephantiasis Non parsitica, Secondary to Chronic Cardiac Disease and Repeated Edema of Pregnancy T W Hastings New York
28 *Results of the Biterminal Transplantation of Veins A Carrel and C C Guthrie Chicago
29 *Essential Pentosuria in Two Brothers. T C. Janeway New York.
30 *Value of Massive Doses of the Salicylates in the Diagnosis and Treatment of Acute Articular Rheumatism T W Clarke Cleveland, Ohio
31 *A New Blood Filaria of Man Filaria Philippines P M Ashburn and C. F Craig Manila, P I
32 *Splenomedullary Pseudoleukemia, with Secondary Myelophthisic Anemia. C. E. Simon Baltimore
33 *Infections of the Biliary Tract with Special Reference to Latent (or masked) and Typhoid Infections A. O J Kelly, Philadelphia

24 **Elephantiasis Nervorum of Scalp**—The patient whose condition Helmholz and Cushing record presented, in addition to many of the commoner features of von Recklinghausen's disease, a relatively unusual type of diffuse superficial tumor formation on the left side of the head, a site at which there had been present for several years previously a large brown spot Twelve years ago the patient was struck by a horse's hoof on the left side of his head, the scalp being severely bruised About a year after the injury the present tumor began to develop The tumor was in the form of a drooping or sagging of the scalp, which progressed so rapidly that in four years' time the scalp covered part of the left cheek, and the ear stood out at right angles from the head and was considerably lower than the right ear There were no subjective symptoms The tumor was readily movable On palpation it felt like a relaxed and emaciated mamma A flap of the scalp large enough to restore the symmetry of the patient's head was removed The thickening of the scalp was found to be due almost entirely to edematous connective tissue which after hardening in formalin was quite tough and could be pulled off readily in sheets and sometimes also in small cords that resembled nerve fibers The authors give a full report of the pathology of this affection and review the literature on the subject.

25 **Study of Cardiac Diseases.**—Hirschfelder's paper is illustrated with diagrams showing the various points brought out It would be impossible to do justice to the article in an abstract without reproducing the illustrations

26 **Insufficiency of Tricuspid Valve During Pernicious Anemia**—Preble reports four cases, occurring in two women and two men, aged 70 53, 40 and 40 years respectively Each case was accompanied by a positive, systolic centrifugal pulse in the external jugular veins The two women died. In none of the cases was there any cyanc [illegible], p [illegible] ngestion of the liver, or edema of the [illegible] In [illegible] all

cases showed some enlargement of the heart, in no instance did it compare in degree with that seen in the commoner instances of tricuspid insufficiency

27 **Elephantiasis Non-Parasitica** —Hastings is of the opinion that a chronic cardiac disease and some local lymphatic deficiency in the right leg were the etiologic factors in his case, which occurred in a woman 28 years of age. With each of four pregnancies there had been moderate bilateral edema of the legs Following the death of her husband the patient began to work as a silk winder, an occupation which necessitated constant walking to and fro Within two years the right ankle began to swell during the day, the swelling subsiding at night, and gradually over a period of one and a half years the leg below the knee became much involved For four years the permanent swelling has been increasing slowly There has been no urinary disturbance and the urine has never been milky Aside from bandages properly applied, rest with elevation of the limb, when possible, and massage, the treatment has been directed to the cardiac disease

28 **Biterminal Transplantation of Limbs.**—As the result of further experiments, Carrel and Guthrie conclude that a venous segment interposed between the cut ends of an artery quickly undergoes anatomic change, assuming the character of an artery and performing the arterial functions

29 **Essential Pentosuria** —The two cases reported by Janeway are a reproduction of those already on record in that they show the usual clinical history

30 **Massive Doses of Salicylates in Rheumatism.**—Clarke discusses the effects of large doses of salicylates, as high as 20 grains hourly, in the treatment of acute articular rheumatism The method of treatment employed by him consisted of giving sodium salicylate every hour, if the patient was awake, in doses varying from 10 to 20 grains, until the toxic symptoms appeared The salicylate was then stopped, to be resumed when the symptoms disappeared, and then given in doses of 10 or 20 grains every two to four hours, stopping again with each recurrence of toxic symptoms The amount of salicylate required to produce symptoms of its full effect has varied from 75 to 360 grains, the average in a series of 74 cases being 200 grains Clarke says that these massive doses are borne well, as a rule, without nausea, vomiting or depression The effect of this sudden saturation with the drug is a very rapid fall of the temperature to normal The relief obtained is most striking The swelling subsides rapidly, sometimes before the pain, and sometimes persists in a mild degree for a day or two longer Cardiac complications, instead of being increased in frequency by this method of treatment, seem to be lessened Clarke urges that the toxic symptoms must be watched for carefully, the drug being stopped immediately on their appearance

31 **Filaria Philippinensis.**—*Filaria philippinensis* is a small sheathed filaria found by Ashburn and Craig in the blood of a Visayan prisoner in Bilibid prison, Manila, at all hours of the day and night, but always in small numbers At the time of their observations is seemed rather more numerous at night, though even then it was, at times, hard to find The greatest number found in one slide was seven Once they examined 17 spreads and found but one parasite. This was one day at noon On another occasion a slide taken at noon showed five organisms They are of the opinion that this filaria represents a new species for the reasons given in the detailed description of the worm because of its lack of periodicity, and because of the rarity of filariasis in the Philippine Islands, where all the conditions would seem favorable to the rapid spread of infection were the parsite one of any of the previously known varieties

32 **Splenomedullary *Pseudoleukemia* and Myelophthisic Anemia.**—Simon makes this diagnosis as furnishing the most probable explanation of the clinical findings in the case reported by him, that of a man 79 years of age There was no enlargement of lymph glands and there was practical absence of any clinical symptoms Examination of the blood shewed a very interesting condition The red cells numbered 2,195 000, the hemoglobin was 25 per cent the color index was 0 58 While there was a certain amount of variation in size and form of the red cells, there was no manifest tendency to macrytosis or oval form, true poikilocytes were not numerous The cells were pale and showed no evidence of polychromasia, while granule cells were present in fair numbers Nucleated red cells were not found. The leucocytes numbered 22,000 The differential count showed lymphocytes, 92 6 per cent (of which 2 per cent. large lymphocytes), large mononuclears, 1 6 per cent, polynuclear neutrophiles, 5 6 per cent, mast cells, 0 6 per cent

33 **Infections of Biliary Tract.**—Kelly's observations are based on a statistical study of the clinical and other phenomena of 216 patients operated on by one surgeon during the last six years Kelly's personal work comprised a study of the gall bladders removed by this surgeon, of the pathologic lesions at the necropsy in some of the fatal cases, and in other cases in which operation was not done, of the pathologic lesions at the operation on some of the patients, and a bacteriologic study begun at the time of operation in 70 of the cases, and at the necropsy in a few of the fatal cases The length of this article precludes abstracting it

Journal of Nervous and Mental Disease, New York.

October

34 *Subdivision of the Representation of Cutaneous and Muscular Sensibility and of Stereognosis in the Cerebral Cortex. C. K. Mills and T H Weisenburg Philadelphia
35 *Ear Affections and Mental Disturbances. E. Amberg Detroit Mich.

34 **Cutaneous Muscular Sensibility and Stereognosis.**—The main object of Mills and Weisenburg's paper is to present the following propositions 1 That the cortical representation of cutaneous and muscular sensibility is independent of motor representation, that it surrounds the motor zone, and that it is subdivided into a mosaic of centers, each center or group of centers being anatomically and functionally correlated to a motor center or centers 2 That every muscle or group of muscles producing a movement or movements which are represented by separate centers in the cortex, is topographically related to a segment of the skin, which has also a definite cortical center, this center correlated anatomically and functionally with the motor center 3 That stereognostic representation like that of cutaneous and muscular sensibility and of movements, has also its independent cortical area and is subdivided after the manner of the motor and sensory area Four cases in point are cited

35 **Ear Affections and Mental Disturbances** —According to Amberg, the ear participates in the production of mental disturbances, directly and indirectly As an organ of sense, its functional disturbance may disharmonize the normal state of thinking The mental disturbance can be brought about in two ways First, by causing hallucinations, respectively, illusions, the influence of which is more or less strong, according to the predisposition of the afflicted individual Entirely different from these disturbances are those in which the ear and its surrounding parts are simply the place in which a toxemia is primarily created, or in which an abscess engaged the vitality of the body Both conditions, while entirely different from each other clinically and pathologically, can produce mental disturbances and aggravate pre existing mentally abnormal conditions

Amberg thinks it very probable that also without a predisposition a mental disturbance can be created if, for example, the annoying subjective noises create a state of exhaustion, e g., *neurasthenia.* These conditions are of *great import from* a forensic point of view and must be considered in declaration of witnesses Physicians are confronted with the important question whether the consent to an operation is required of an adult patient whose mental activity is temporarily interfered with and who is unable to judge about his condition, also if the consent of the relatives is necessary in such a case Amberg believes that the ears of inmates of insane asylums should be examined, and that patients suffering from mental disturbances who exhibit phenomena on the part of the organ of hearing should be examined not only for pathologic conditions of the ear, but also of other organs, such as the kidneys on account of the fact that the disturbance in the ear, although in itself a new center, may only be a reflex disturbance The benefit of surgical interference in ear affections should be bestowed on the insane in need of it

Texas State Journal of Medicine, Fort Worth.

October

36 *Empyema of the Gall Bladder H M Doolittle, Dallas
37 *Abscess of Temporo-Sphenoidal Lobe. J Mullen Houston
38 Paresis. J S Turner Terrell
39 *Case of Acute Mastoiditis Complicated by Ulceration and Rupture of the Esophagus. J O McReynolds, Dallas
40 Conservatism in Operative Gynecology W L Brown El Paso
41 Cinders in the Eye. R. H T Mann Texarkana
42 *Gunshot Wounds of the Abdomen J H Smart, Dallas

36 **Empyema of Gall Bladder**—Doolittle discusses the clinical history of this affection and reports one case which illustrates some of the most important points of the diagnosis and technic

37 **Abscess of Temporosphenoidal Lobe**—Mullen reports a case in which a Schwartz Stacke operation was performed successfully Owing to the age of the patient, 7 years and his extreme restlessness it was necessary to make the daily dressings under chloroform anesthesia. The patient was in the hospital 43 days and during this time he was chloroformed 42 times The diagnosis in this case was rendered more than ordinarily difficult by the entire absence of local symptoms Another interesting feature of the case was the intense leucocytes and its gradual decrease as drainage improved and the amount of pus decreased

39 **Acute Mastoiditis Complicated by Ulceration of Esophagus**—In the case reported by McReynolds there existed a perfectly plain acute mastoiditis which followed a subacute involvement of the mastoid antrum and middle ear cavity The patient was operated on but shortly afterward went into a condition of extreme shock, during which he died At the postmortem examination it was found that death was due to a complete rupture, three inches in length, in the lower third of the esophagus supervening on an extensive ulceration of the walls of the esophagus with a resulting profuse and fatal hemorrhage No unusual strain had been placed on the esophagus on the morning of the rupture, in fact, the patient had eaten practically no food for about one week

42 **Gunshot Wounds of Abdomen.**—Smart is of the opinion that the proper procedure in cases of abdominal gunshot wounds is to get the patient speedily to a hospital and to explore promptly for injuries and to repair them when found. He reports five cases, with three recoveries One death was caused by shock, and the other by peritonitis

Journal Missouri State Medical Association, St. Louis

October

43 *Pyuria. E G Mark, Kansas City Mo
44 Use and Abuse of the Obstetrical Forcep A L Gray St Joseph Mo
45 Gastric Neuroses. V A. Bies St. Louis.
46 Criminal Abortion A Prevailing Evil Against the Unborn Generation, A National Crime Committed for Mere Social Promotion T F Lockwood Butler Mo
47 *Best Time to Give Quinin R L Johnson, Rolla, Mo
48 Suppuration of Maxillary Sinus with Involvement of Ethmoidal Cells and Sphenoidal Sinuses H J Jurgens Edina Mo
49 Value of Jaundice as a Diagnostic Factor in Disease of the Biliary Passages. J Q Chambers Kansas City

43 **Pyuria**—Mark discusses the chronic form of pyuria arising from suppurative processes in the urogenital tract in which pus in the urine is the most persistent and tangible symptom He considers the catheterizing cystoscope the most valuable apparatus for segregating the urine

47 **Best Time to Give Quinin**—According to Johnson the best time to give quinin in malaria is immediately on the commencement of the sweating stage, to promote its remedial absorption and its prompt elimination He gives the drug in one dose of from 15 to 25 grains

Journal of the Minnesota State Medical Association and the Northwestern Lancet, Minneapolis

October 1

50 Cardiospasm. H S Plummer Rochester Minn
51 Notes on Ocular Syphilis. E. S Strout, Minneapolis
52 Calorimetric Principle in Infant Feeding J I Sedgwick Minneapolis.
53 *The Business Problem of the General Practitioner C Johnson Willmar Minn
54 Gastroenteritis H Hughes Mankato Minn

53 **Business Problem of General Practitioner**—Johnson says that from a high idealistic standpoint the medical profession is regarded as a charitable organization which should be forgetful of self and ever devoted to the service of others irrespective of hope or expectation of reward. As a matter of fact, medicine, as a business vocation, does not compare favorably with other vocations for return on investment and energy extended Physicians have not paid enough attention, he says, to the business aspect of their profession, hence, their incomes are ridiculously small, although, because of the boasting habits of physicians, they are believed to have much larger incomes than they do have So many factors are operating to reduce the physician's income that this matter ought to be discussed fully at every medical meeting Johnson believes that in thorough organization of the profession lies salvation If the county, state and national societies will stand behind every member whenever and wherever he is assailed in his rights and in his pocketbook, then there will be a thoroughly organized and prosperous medical profession

Bulletin of the Johns Hopkins Hospital, Baltimore

October

55 *Bacteriologic Examinations of the Conjunctival Sac in Typhoid Fever and in Pneumonia R L. Randolph Baltimore
56 *Tuberculosis Work in Europe. J Walsh Baltimore
57 Moses Maimonides. D I Macht, Baltimore.
58 *Observations on Paroxysmal Tachycardia. A D Hirschfelder Baltimore.
59 *A Simple Method for the Quantitative Determination of Proteids in Milk T R. Boggs Baltimore

55 **Conjunctival Sac in Typhoid and Pneumonia**—Based on an examination of 100 cases of typhoid fever and 48 cases of lobar pneumonia occurring in the wards of the Johns Hopkins Hospital, Randolph concludes that the bacterial flora of the conjunctival sac during typhoid fever and pneumonia shows practically no difference from the conjunctival flora of individuals who are in perfect health Randolph states that it does not seem unreasonable to suggest that the exposed mucous surfaces throughout the body are inhabited by bacteria which perform for their resting place functions of a protective character by making the surroundings uncongenial to bacteria of other kinds

56 **Tuberculosis Work in Europe**—Walsh concludes his paper as follows 1 Although the sanatoria in the United States are probably accomplishing better results in individual cases, we have not a sufficient number of sanatoria Germany, with only two thirds our population, not one tenth our area, and not one twentieth our wealth, has more sanatoria, and is spending three times the amount of money on them 2 We are not using all the means that might be employed to build and to maintain sanatoria, like insurance companies, beneficial societies, etc. 3 We are lacking in hospitals for advanced cases, and until we get them, wards in general hospitals should be set aside for the care of the tuberculous Such wards in addition to caring for the consumptive will help in the education of the general physician, the residents, the nurses and the patients 4 The tuberculosis dispensaries as managed in France or in Germany are the most important elements in the crusade against tuberculosis, and we are woefully lacking in them A city the size of Philadelphia should have at least half a dozen, and it has one Baltimore should have three or four, and it has one Such dispensaries might be supported as follows One by the city (as in New York City) one by charity, and one by a combination of beneficial societies

58 **Paroxysmal Tachycardia**—Hirschfelder reports a case of paroxysmal tachycardia in which the patient's condition was improved very much by the administration of 2 mg of atropin within two hours The drug was used in 5 minim doses of the tincture, repeated once or twice at half hour intervals

59 **Quantitative Estimation of Proteids in Milk.**—Boggs finds that phosphotungstic [illegible] chloric acid solut [illegible] precipitates instantly all t [illegible] ely divided [illegible] tion The precipitate [illegible] and reaches a consta [illegible] hours The supernat

proteid by any tests The solution employed is composed as follows Phosphotungstic acid, 25 grams, distilled water, 125 c.c. After thorough solution is obtained there is added 25 c.c. of concentrated hydrochloric acid, diluted with 100 c c of distilled water This yields 250 c.c. of a 10 per cent solution of phosphotungstic acid in about 3 per cent hydrochloric acid The solution is quite stable if kept in a dark bottle, and gives satisfactory results after months of standing In a series of over 300 precipitations of various milks the results were surprisingly uniform, particularly in human milk.

Colorado Medicine, Denver

September

60 Case of Round Worms in an Adult. M D Gibbs, Van Houten N M.
61 Case of Rupture of the Uterus W H Swan, Colorado Springs
62 Albumosuria of Phthisis. J F McConnell Colorado Springs.
63 Dermatoses and Dry Climate J M Blaine, Denver
64 Treatment of Eclampsia. E Lawney Denver
65 Operative Methods in Puerperal Eclampsia. H. G Wetherill Denver
66 *Medical Organization E Stuver Ft. Collins.

66 **Medical Organization.**—Stuver says that medical organization prevents misunderstandings, ill will and envy, and promotes fraternal feeling and friendship A good medical society stimulates scientific activity and a healthy rivalry in improving individual efficiency and skill. Such work creates a good impression in the community where it is done, and secures higher fees and greater regard for the men who are doing it Stuver says that if every physician, individually and collectively, through his local medical society, used his best efforts to secure a pure water supply and to protect it from contamination, for every village, town and city in the nation, it would not be long before typhoid fever would be almost entirely eliminated as one of the scourges of our land If every doctor insisted that no milk should be sold except that obtained from healthy, properly cared for cows, there would be an immense reduction in the infant death rate If a united profession firmly insisted and demanded the passage of pure food laws, whereby adulteration and sophistication would be punished by severe penalties, and that every package made should contain a true statement of its ingredients and their exact proportions, there would be a great reduction in ill health from that kind of poisoning, and in malnutrition caused by lack of nutrient ingredients If we had a united and enthusiastic profession calling attention to the benefits arising from vaccination in the prevention of smallpox, the use of antitoxin in the prevention and treatment of diphtheria, and other preventive and sanitary measures, we would hear very little of antivaccination cranks and the evils following their hysterical propaganda, the cheap assaults of still cheaper medical journals, against antitoxin, and the ever recurring campaign of misrepresentation and abuse of the anti vivisectionists against the world's greatest benefactors Stuver urges physicians to organize, to act as a unit, to pull together, to outline a plan of campaign, and then everyone to work toward a common goal Educate the public on these important topics, and besides being members of a better prepared, better paid and more highly respected profession, physicians will have the proud consciousness of knowing that they have fought a good fight, that they have battled for decency, truth and right, and that their efforts have not been in vain

The West Virginia Medical Journal, Wheeling

October

67 What Can the General Practitioner Do in the Early Recognition and Cure of Mental Disease? W H Yeakley, Davis W Va
68 *Value of Union in the Medical Profession—How Remedy the Defects of Organization A. S Grimm St. Mary's
69 Recent Surgical Operations J H Branham Baltimore Md
70 *Diagnostic Value of the Cystoscope and Ureteral Catheter J E Cannaday Paint Creek
71 A Year's Work in Obstetrics Facts Figures and Comments H K. Owens, Elkins

68 **Value of Union in the Medical Profession.**—Grimm points out many instances where the organization of the medical profession is beneficial to its members Such an organization affords an opportunity for physicians to meet and to discuss matters of interest professionally financially and socially These meetings, he says, afford an opportunity for a free discussion of the nostrum evil, of life insurance fees and many other burning questions He recommended that a circular be printed enumerating the advantages of union and the good the association has accomplished notwithstanding the indifference of the profession at large, this circular to be mailed to each member of the medical profession who does not belong to the association

70 **Diagnostic Value of Cystoscope and Urethral Catheter.**—Cannaday believes that the cystoscope as an accurate scientific instrument is of comparatively recent inception and perfection, that the other mechanical aids to the collection of the separate urines are not by any means absolutely dependable, that the cystoscope and urethral catheter have their limitations, shortcomings and defects, and are not ideal, that these appliances are of especial value in diagnosing the causes of hematurias, in the discovery of calculi and foreign bodies in the bladder, that a careful study of the ureteral orifices gives more than an inkling of the conditions present in ureter and kidney Definite information concerning the origin of a pyuria can be elicited by the use of the cystoscope and ureteral catheter which could not have been obtained in any other way

International Clinics, Vol. II (Sixteenth Series), Philadelphia.

72 Prognosis and Treatment of the Chronic Valvular Diseases of the Heart. D Rochester, Buffalo N Y
73 Prevention and Treatment of Acute Nephritis J M. French, Cincinnati, Ohio
74 Treatment of Migraine with Special Reference to the Use of Cannabis Indica. G C de LaCarriere, Paris France.
75 Prophylaxis of Nervous Disease with Special Reference to Educational Influences in the Growing Child. P Zenner, Cincinnati, Ohio
76 Pulmonary Abscess Ending in Recovery without Operation, A Study by Means of the Roentgen Rays. J M Anders, and G E Pfahler Philadelphia.
77 Diagnosis and Treatment of Abscess and Gangrene of the Lungs with Special Reference to Operation F T Lord, Boston.
78 The True Significance of Uric Acid W H Porter New York.
79 Clinical Types of Persistent Vomiting H C Moffitt, San Francisco
80 Use of Discarded Street Cars in the Open air Treatment of Tuberculosis. J J Walsh New York.
81 An Unusually Large Aneurism of the Abdominal Aorta. H Goodloe, St. Louis Mo
82 Cardiac Lesions Associated with Arteriosclerosis. F C. Wilson Louisville, Ky
83 Miscellany from the Paris Medical World; The Use of X rays as a Social Question Heroinomania Serum Treatment of Exophthalmic Goiter, and of Hemophilia. C K. Austin, Paris, France
84 Infantile Derangements due to Improper Breast Feeding with Suggestions for the Prevention and Treatment of Constitutional Disorders Such as Rickets and Marasmus L. Fischer, New York.
85 Hysterical Neuroses of the Stomach, with Report of a case of Rhythmical Borborygmi of Hysterical Origin J H Lloyd Philadelphia.
86 Tumors of the Mammary Gland with Special Reference to Their Diagnosis Prognosis and Treatment. W L. Rodman, Philadelphia
87 Jacksonian Epilepsy due to Brain Tumor Operation Recovery Tuberculous Abscess of Shoulder-Joint, Mistaken for Progressive Muscular Atrophy M. Schlapp New York
88 Principles of the Treatment of Fractures with a Special Consideration of those of the Upper Extremity G G Ross, Philadelphia.
89 Experimental Researches Bearing on Surgical Intervention in Nephritis. A Rovighi Bologna, Italy
90 Disorders of the Umbilicus with Special Reference to the New born and the Infant I Umbilical Hernias A E Gallant New York.
91 Fetal Hydrocephalus as a Cause of Delay in Labor J W Ballantyne Edinburgh Scotland
92 The Female Perineum and its Repair W A N Dorland Philadelphia.
93 Gonorrhea in Women C Lockyer London
94 Two Cases of Ectopic Pregnancy with some Unusual Features L Frank Louisville Ky
95 Choice of Medicinal Agents for Topical Use in Gynecologic Practice C. D Palmer Cincinnati Ohio
96 Intratracheal and Intralaryngeal Injections. W G B Harland Philadelphia.

Philippine Journal of Science, Supplement III, Manila

August 15

97 *New or Noteworthy Philippine Plants* V F D Merrill Manila, P I

Texas Medical News, Austin

September

98 Treatment of Paralysis Agitans G F Butler Chicago
99 Alcohol in the Treatment of Typhoid Fever W O Wilkes Waco
100 Diseases of the Biliary Tract—Special Reference to the Pathology and Differential Diagnosis of Cholecystitis and Cholelithiasis W L. Crosthwait Holland

Wisconsin Medical Journal, Milwaukee

September

101 The Clinical Aspect of Stomach Surgery A. J Ochsner, Chicago
102 Appendicitis and the Differential Diagnosis of Appendicitis in Children F E Sutherland Janesville.
103 Contract and Club Practice W H Saunders, Kenosha.
104 Infant Feeding J Binnie, Poynette.

The Medical Standard, Chicago

October

105 Notes from Nothnagel s Clinic. G B Hassin, Chicago
106 German Gynecology L. Waite Chicago
107 Practical X ray Therapy N M Eberhard Chicago
108 Tractus Genitalis in Splanchnoptosia. B Robinson Chicago

Milwaukee Medical Journal.

September

109 The Value of Clinical Tests Used in Typhoid Fever C. A. Sanders Waupaca, Wis.
110 Signs and Symptoms of Value in the Prognosis of Typhoid Fever H H Milbee Marshfield, Wis.
111 Intestinal Hemorrhage and Perforation C v Neupert, Jr Stevens Point, Wis.
112 Management of Typhoid Fever in Private Homes. S W Keys Weyauwega Wis.
113 Therapy of Hemorrhages of Stomach and Intestines J Bruess Milwaukee.

Cleveland Medical Journal.

October

114 Myocarditis in Acute Infectious Diseases J H Lowman Cleveland.
115 Scope and Aim of Orthopedic Surgery H O Feiss Cleveland
116 Surgery of the Gall Bladder and Bile Ducts. A F House Cleveland.
117 Case of Poisoning with Hellebore J W Boss, Birmingham Ohio

Albany Medical Annals

October

118 Nil Desperandum as an Article of the Refractionist s Materia Medica. G M. Gould Philadelphia.
119 Tumors of the Trachea. C F Theisen Albany
120 Address to Graduates of the Samaritan Hospital Training School for Nurses G A. Blumer, Providence, R. I

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

September 29

1 Delimitation of General Paralysis of the Insane. W J Mickle.
2 *Etiology of Dementia Paralytica. A. R. Diefendorf.
3 *Cerebral Localization and the Study of Psychiatry C K. Mills
4 The Insanity of Inebriety T D Crothers
5 Dementia Præcox. C. K. Clarke, A. Meyer and F X. Dercum
6 Types of the Devolutional Psychoses. C B Farrar
7 Proposed Sterilization of Certain Mental Degenerates. R. R. Rentoul
8 Mind in Medicine A. T Schofield.
9 Rational Psycho-Therapeutics P Dubois.
10 *Cerebral and Ophthalmic Complications in Sphenoidal Sinusitis. St Clair Thomson
11 *Pneumotoxin A. MacFadyen
12 *Rupture of Interstitial Tubal Pregnancy Hysterectomy G B Hunt.

2 **Etiology of Dementia Paralytica.**—Diefendorf expresses the belief that this disease is increasing in its prevalence, and particularly in cities Studying 172 cases at the Connecticut (U S A.) Hospital for the Insane, he found that there is one paretic from the country to 5 4 from the city, and one male to 3 0 females Among the women the striking fact is that 17 per cent. of them were prostitutes Examining closely into the importance of the prominent etiologic factors in several occupations which show great proneness to paresis, it was evident that alcohol and syphilis predominate The average age at onset is 42 years, the limits being 23 and 68, the largest number of cases occurring between the ages of 35 and 40 Defective heredity also is a potent etiologic factor Excessive alcoholism was present in 60 2 per cent of the cases Syphilis occurred in 52 5 per cent of the cases Head injury existed in only 23 per cent Defective heredity existed in 41 per cent Insolation occurred in only 1 2 per cent of the cases and plumbism in only one case Physical and mental overwork were causes in only 4.9 per cent of the cases, and emotional shock in 3 per cent Diefendorf considers these conditions as contributory contracted only in producing the causation of paresis, and believes that the actual cause is still unknown

3 **Cerebral Localization**—Mills discusses particularly the cerebral mechanism of hallucinations and illusions and the classification of the forms of insanity He says that the factors which should be considered in attempting a classification of insanity are 1 The structural rests or aberrations due to heredity, which predispose the brain to mental disease 2 The course and prognosis of the form of insanity—elements of age and development periods here largely entering 3 The election of particular cerebral mechanisms by the exciting causes, bacterial or toxic, of the attack of insanity The best general subdivision of insanities is, he believes, into the teratologic or abiotrophic and the pathologic or acquired Under teratologic insanities he classes first the dementias due to structural arrest (embryonal apotentiality), including (a) *congenital idiocy and imbecility, (b) dementia præcox*, (c) dementia choreica and other presenile dementias, (d) senile dementia Second, the insanities due to structural insufficiency, not of such degree as to produce primary dementia Under this head would be included (a) the melancholia mania group, (b) paranoia, (c) hysteria, (d) epilepsy, (e) psychasthenias The second great division comprises the pathologic insanities Under this head would be included: First, those due to diffuse destructive organic disease, as (a) the forms of imbecility or mental defect due to postnatal causes, (b) general paresis, (c) syphilitic insanity due to gross lesions and degenerations (d) traumatic insanities, second, the insanities due to toxemias and exhaustion

10 **Complications in Sphenoidal Sinusitis**—Thomson reports two cases in which the sphenoidal origin of intracranial suppuration was fully established In one case it assumed the form of acute suppurative basic meningitis, and in the other that of thrombophlebitis of the cavernous sinus In both cases the diagnosis was made during life and was confirmed by postmortem examination Thomson states that the reason why the association of sphenoidal sinusitis with disease in the orbital and cranial cavities has not been hitherto more fully substantiated is that medical men do not attach much importance to the condition of the nasal cavities, either at the bedside or on the postmortem table

11 **Pneumotoxin.**—McFadyen succeeded in extracting an acute lethal toxin from the bodies of virulent pneumococci, and is now carrying on a series of immunizing experiments with a view to procuring an antitoxic serum

12 **Interstitial Tubal Pregnancy**—Hunt reports a case in which the gestation sac was situated in the wall of the uterus The patient, a multipara, aged 30, was seized with sudden pain in the left side of the lower abdomen which led to the diagnosis of ruptured tubal pregnancy At the operation a small ruptured sac full of clotted blood was seen projecting from the wall of the uterus just above the point of the emergence of the left tube In order to stop the hemorrhage it was necessary to do a hysterectomy The patient recovered

The Lancet, London

September 29

13 Pharyngeal Abscesses G E Waugh
14 *Arterial Blood Pressure in Heart Disease H J Starling
15 Streptococci Pathogenic for Man F W Andrewes and T J Horder
16 Thoracotomy for Traumatic Hemothorax Due to a Wound of an Intercostal Artery D Duff and J Allan
17 *Two Cases of Hepatic Abscess Treated by the Transpleural Operation H Taylor
18 *Endemic Hematuria P G Stock.
19 *A Case of Ainhum D M. Alexander and R Donaldson
20 *Study of a Case of Plague J B Cleland
21 *The Suprapubic Dressing G H Colt

14 **Arterial Blood Pressure in Heart Disease**—Starling found that no matter how bad the condition of the patient or how ineffective the work of the heart, the arterial blood pressure is never below normal in any case of so called heart disease. He emphasizes the importance of a reading of arterial pressure *in all cases of failing heart because it furnishes an* index as to the treatment A number of cases in point are cited

17 **Hepatic Abscess**—In the two cases reported by Taylor the abscess, instead of making its way toward the abdominal wall took an upward course making it necessary to approach the abscess through a transthoracic incision.

18 Endemic Hematuria —Stock reports 65 cases of endemic hematuria that were caused by the bilharzia hematobium In view of the fact that these organisms are invariably killed by acute infections, Stock suggests the hypodermic injection of Wright's antityphoid serum in the treatment of these cases Two of his patients are now being treated accordingly

19 Ainhum —Alexander and Donaldson report the case of a seaman, a native of Jamaica, aged 44, who suffered from ainhum for about 20 years There was no history of loin pains, of any other persons in the family having suffered from this disease or from epilepsy, or of the patient having at any time worn toe rings He had gone barefooted until he was 14 years old, but there was no jungle and very little grass at his home, thus precluding trauma as the cause of his trouble

20 Plague —According to Cleland, the onset of signs and symptoms in plague is the first indication of commencing the recovery from the disease He thinks this observation may throw some light on the lengthy incubation periods of various infectious diseases He believes that the skin and inoculation theory of plague is a correct one.

21 —See abstract in The Journal, Dec. 2, 1905, page 1763

The Journal of Tropical Medicine, London.

September 16

22 Sprue and Chronic Intestinal Lesions J Cantlie

Glasgow Medical Journal.

September

23 *Unusual Case of Ruptured Tendo Achillis. D Macartney
24 Case of Marked Paroxysmal Dyspnea, Occurring in a Patient with Double Aortic Disease, and Wherein, After Death Were Disclosed Striking Appearances of Chronic Mediastinitis. J S M Kendrick
25 Clinical and Pathologic Aspects of a Fulminating Case of Epidemic Cerebrospinal Meningitis of the 'Convulsive Comatose Type of Tourdes. G A. Allan and J S Dunn

23 Rupture of Tendo Achilles —Macartney reports the case of a young man, aged 19, who sustained a rupture of the left tendo Achilles, the time and circumstances connected with the injury being unknown There was a rounded, tumor like mass at the mid leg composed presumably of the contracted free end of the tendon and part of gastrocnemius muscle Macartney made a transverse incision through half of the muscle well up the leg, split the muscle vertically by a longitudinal incision down its middle to a short distance above the tendon, then bringing the upper part of the muscle down to the lowest should con[illegible] The inverted portion of the muscle exact proportions, their [illegible] of poisoning, and in [illegible] a united and [illegible] health from that kind [illegible] If we had [illegible] by lack of nutrient ingredients [illegible] calling attention to the benefits arising [illegible] ortion of [illegible] sheath [illegible] by a dozen or so of as stitched to both sides of the sheath by a dozen or so of sutures of strong catgut Enough of the muscle tissue sur[illegible] ived the restored power to the limb Nine months after the operation the patient walked well and without limping

The Dublin Journal of Medical Science

September

26 Clinical Report of the Rotunda Hospital E H Tweedy
27 Two Cases of Infantile Hemiplegia D J O Connor
28 A Note on the Opsonic Index B Brooke.

Presse Médicale, Paris

29 (XIV No 71) Considérations générales sur le service de santé au combat (sanitation in war) F H Renaut
30 *Dilatation aigue du cœur chez le nouveau né et asphyxie bleue (acute dilatation of heart in the newly born and blue asphyxia) J Ferreira.
31 *Improvisation d un milieu opératoire a la campagne (operations in the country) P Sikora
32 (No 72) Les nouvelles théories des solutions dans leurs rapports avec la médecine S Leduc.
33 Complications pulmonaires et pleurales des corps étrangers des bronches latents ou méconnus. Perrin and J Parisot.

30 Acute Dilatation of the Heart in the Newborn —Ferreira says that in the asphyxia of the new born it is not enough to stimulate the respiration, but that the myocardium must be stimulated also It frequently happens that the asphyxia is due to acute dilatation of the heart, and he has been able to save a number of infants, apparently otherwise doomed, by measures addressed to the myocardium If the circulation is interfered with from any cause, the right auricle becomes exhausted by the excess of pressure, and it stretches and the child is born with the symptoms of "blue asphyxia" [illegible] percussion especially the sensation of resistance [illegible] sounds, reveals this acute dilatation of the right auricle, and it is a frequent finding at autopsy of new born infants Sometimes a probe can be passed readily from one auricle into the other Examination of the blood discloses excess of blood corpuscles. The condition of blue asphyxia, he states, is merely an acute phase of cyanosis In both cases there is acute dilatation of the right auricle Injection of camphorated oil has given excellent results in his experience He injects 1 or 2 c.c. of a mixture of 0 3 gm camphor in 30 gm of olive oil An artificial carbonated bath, according to Mougeot, has a manifest tonic action on the myocardium Tapping massage of the precordial region also has a tendency to incite the myocardium to contract with greater energy

31 To Improvise an Operating Room.—Sikora gives minute instructions how to transform any room and patient into an aseptic operating field The main reliance is on boiling and singeing, but he advises raising the boiling point of water, etc, by adding sodium carbonate or borate. A handful of wood excelsior can be used instead of a brush for scrubbing, after thorough sterilization A thermocautery can be improvised out of a long pair of forceps held with a wet compress, and artificial serum can be easily prepared by boiling a level teaspoonful of salt in a quart of boiled water for three-quarters of an hour All the vessels and spoons, etc., used should be singed inside and out He has improvised an operating table by placing a kitchen chair on a table, resting on the edge of its seat and back, and fastened immovably A broomstick was then tied across the highest crossbars of the chair, and a blanket was thrown over the whole and a sheet over this The patient's shoulders rested on the table, while the pelvis and thighs rested on the sloping back of the chair and the legs on the projecting ends of the broomstick on each side He found this much firmer and better than any arrangement of cushions or manual support Five dishes are necessary for the disinfectants for the hands, etc, and seven if there is an assistant If there is no immediate haste the room should be emptied, washed and sprayed with peroxid of hydrogen, but in case of haste, he isolates the furniture, floor and ceiling by covering them with freshly laundered sheets Still better isolation is obtained by supplementing these measures by tacking one edge of a sheet to the ceiling or throwing it over a rope, to curtain off in this way three sides of the space reserved for the operation, leaving open the side toward the light, with a fourth sheet for a roof over the space In selecting a room, light is the main consideration

84 [illegible] Suggestions [illegible] Disorders [illegible]

Archiv f Verdauungskrankheiten, Boas', Berlin.

Last indexed page 312

34 (XII No 4) Acidity of Gastric Juice in case of Chronic Obstipation —Das Verhalten der Magensaftacidität bei chronischer Obstipation F Samuely
35 Fat splitting Capacity of Stomach —Ueber die Fähigkeit des Magens Fett zu spalten. S von Pesthy
36 Untersuchung über die phosphorhaltigen Bestandtheile der Darmschleimhaut (phosphorus-containing elements in intestinal mucosa) A Borri.
37 *Sahli s New Test of Stomach Functioning Without the Use of the Stomach Tube —Die Desmoid Reaktion und ihre radiologische Weiterbildung durch Schwarz. L Horwitz
38 Nature of Nothnagel s "Yellow Mucous Granules in Infants Stools —Ueber das Vorkommen und die Natur der Nothnagelschen 'gelben Schleimkörner in den Säuglingsfæces O Spiegel

37 Desmoid Reaction as Test of Stomach Functioning —Sahli's desmoid test of the stomach functioning has been described in these columns, his original communication having been summarized on page 1820 of vol XLIV, June 3, 1905 Horwitz has been applying the test in 44 cases of various gastrointestinal affections, and has been impressed with the importance of the findings He says that examination of the stomach contents after a test meal is unquestionably the best means of testing the functioning of the organ, but in case the use of the stomach tube is contraindicated for any reason or its findings are dubious, the desmoid test will be found very instructive It is especially instructive when the little bag of goldbeater's skin is filled with bismuth, 1 5 gm and tied with thread and ingested during a test breakfast, according to Schwarz's modification of the test Radioscopy then shows the little bag as a round black spot in the lowest part of the stomach The patient should lie on the left side to retain the bag in the stomach as long as possible, and should take noth

ing during the entire day except tea and water Sahli first used goldbeater's skin for the little bag, but as he found that this material varied so widely in thickness and resistance, he now uses thin rubber tissue and ties the bag with No 00 catgut, depending on the digestion of the catgut to release the contents of the bag He includes in the bag 0 05 gm of methylene blue with or without 0 1 gm iodoform and about 0 04 gm each of licorice extract and powder Schwarz thinks that the methylene blue is liable to diffuse through too thin a membrane Horwitz answers the various criticisms of the desmoid test, showing that none of them actually discredits it, and that it has unquestionably an important sphere of its own Sahli says that the green aspect of the urine from 4 to 6 up to 20 hours afterward, indicates a positive reaction, and that in such a case the digesting power of the gastric secretions is approximately normal Sahli examines the urine at long intervals, up to 20 hours, to allow for variations in absorbing capacity Horwitz believes that an interval of even 15 hours throws grave doubt on the stomach functioning In such a case the test should be repeated and possibly preceded by giving a little methylene blue beforehand, to test the absorbing capacity If radioscopy shows the bismuth bag as a round spot in the stomach or intestines later than three hours, hypoacidity or anacidity may be assumed When the connective tissue of which the bag is made is digested at any point, the bismuth escapes and spreads out over the region If this occurs in an hour and a half after swallowing the bag extreme hyperacidity is present If it does not occur until two hours, moderate hyperacidity may be assumed If it occurs in two and a half hours, normal conditions prevail If not until after three and a half hours, slight hypoacidity may be assumed, and extreme hypoacidity if from four to four and a half hours elapse before the contents of the bag escape, five hours indicates anacidity

Horwitz applied the desmoid test after dinner after previously testing the stomach contents after a test breakfast All the evidence indicates that the raw connective tissue of the desmoid bag is not digested by the pancreatic or intestinal juice, only by the gastric juice, and only when this contains free hydrochloric acid and pepsin The findings in his cases harmonized in nearly every instance with those of the preceding examination of the stomach content He directed the patients to urinate before dinner and then at 3 hour intervals, until the urine had turned green, sending him each sample separately The desmoid test gave invariably negative results in cancer cases Alkaline urine has to be boiled with acetic acid to oxidize the chromogen of the methylene blue. Schwarz's radiologic findings contradict some well-established ideas in some respects, for instance, in his extensive experience, he never found ingesta of any kind retained longer than 10 hours in a stomach free from stenosis and of comparatively normal size The normal stomach, he found, did not always digest catgut 00, while this was sometimes digested by the intestinal juice Horwitz did not try the Schwarz modification of the desmoid test

Beiträge z Klinik der Tuberkulose, Würzburg

Last indexed vol xlvi page 1976

39 (V No 4) *Conjugal Tuberculosis.—Lungenschwindsucht beider Ehegatten W Weinberg
40 *Sodium Silicate in Treatment of Pulmonary Tuberculosis and Participation of Silicic Acid in Production of Lung Stones—Ueber die therapeutische Verwendung des kieselsauren Natriums und ueber die Beteiligung der Kieselsäure an der Bildung von Lungensteinen Zickgraf
41 Beiträge zur Statistik und Klinik der Tuberkulose J Wiesel
42 Hemoptysis in an Infant—Zur Lehre der Hämoptoe im Säuglingsalter J Kasten
43 *A Thousand Sanatorium Cases.—Tausend Heilstättenfälle J Nagel
44 *Ueber Tuberkulose der Schädelbasis (of base of skull) W Stockert.

39 Conjugal Tuberculosis—Weinberg's statistics show that widows and widowers surviving the deaths from tuberculosis of their consorts suffer from tuberculosis in double the percentage exhibited by the rest of the population Widows are more frequently affected than widowers and the proportion is larger in the crowded homes of the poor than among the well to do His statistics were collected at Stuttgart and are classified and tabulated

40 Value of Sodium Silicate in Tuberculosis.—Zickgraf has been experimenting with sodium silicate as a means to aid the organism in its battle against the tubercle bacilli Its use was suggested by Kobert in 1901, as mentioned in these columns at the time The silicate becomes deposited in the morbid process and helps to transform the fibrous connective tissue proliferation into permanent cicatricial barriers His experience has confirmed its absolute harmlessness in internal administration It is absorbed in the body and appears in the urine merely as an increased amount of the normally present silicic acid It seems to exert a slight leucotactic action on its way through the blood, while its share in the petrification of the tuberculous tissue is important Some of his 22 patients had coughed up calculi from the lungs One in particular had been tuberculous for ten years and had treated himself with an herb tea for a long time. The herbs used were rich in silicates, and probably they were responsible for the large proportion of silicates found in the calculi from the lungs The French have long been proclaiming that one of the most potent factors in tuberculosis is the "demineralization of the body" If this be true, Zickgraf says, the administration of silicic acid is progress in the right direction It supplements the ordinary hygiene and dietetic measures, and the results in the 22 cases in which Zickgraf applied this treatment were highly encouraging It is possible that the silicic acid is better adapted for the desired purpose than any other mineral yet tried

43 One Thousand Tuberculous Patients Treated at Cottbus Sanatorium, 1900-1904—Nagel analyzes this material and summarizes the lessons learned In the large majority of cases the effects of the sanatorium treatment were the restoration to health and to complete earning capacity with no signs of recurrence to date The findings on examination after several years are tabulated from various points of view

44 Tuberculosis of Base of Skull—Stockert's patient was a butcher of 22, of a healthy family He had had several attacks of articular rheumatism and during the last nine months had headache and pain in the left upper jaw, with other symptoms suggesting a tumor at the base of the skull Meningitis developed and he died suddenly from arrest of the respiration A tumor was found as surmised, but it proved to be a tuberculous lesion instead of the assumed cancerous growth The tumor had involved the left base of the skull grown around the left optic nerve, and penetrated down into the pharynx The clinical and microscopic findings were those of a malignant growth, but the microscope showed it to be a granulating tuberculous process A small, apparently fresh tuberculous process was discovered also in the left apex

Berliner klinische Wochenschrift

45 (XLIII No 31) Ueber die Antiamboceptoren gegen die komplementophile Gruppe des Amboceptors F Friedberger and C. Moreschi
46 *Injurious Action of Light and Air on Milk—Ueber belichtete Perhydrasemilch H Much and P H Römer (Marburg) Concluded
47 (No 32.) *Bilateral Resection of Upper Jaw—Die beiderseitige Oberkieferresektion O Hildebrand
48 Weiteres zur Kenntnis der myeloiden Umwandlung (transformation) H Hirschfeld.
49 Head's Zones in Respect to Affections of Digestive Organs—Zur theoretischen und praktischen Bedeutung Head'scher Zonen bei Erkrankung der Verdauungsorgane L. Kast
50 *Paraffin Injektionen und Implantation bei Nasen und Gesichts Plastiken (nose and face) H Eckstein
51 (No 33) Ueber Polyarthritis chronica deformans H Curschmann
52 *Ptomain Poisoning and Paratyphus—Fleischvergiftung und Paratyphus. H Trautmann (Hamburg)
53 Determination of Sugar in Urine—Ueber Zuckerbestimmung im Harn S Rosenberg

46 Action of Sunlight on Milk.—Much and Römer announce that the results of their tests have demonstrated that sunlight and oxygen alter the taste of milk after even a brief exposure They affect the fat in the milk altering it to a kind of tallowy consistency from oxidation of the fat Milk thus altered is liable to affect infants injuriously They advise that milk bottles should be wrapped in black red or green paper The same effects are observed after exposure to sunlight with their perhydrase milk as with ordinary raw milk The advantages claimed for their aseptic perhydrase milk were summarized in these columns recently They treat ordinary milk with peroxid of hydrogen which sterilizes it [illegible] ly sharp limitation of the diseased and sound parts, it is wiser, he thinks, to refrain from resecting, as the resisting power of the peritoneum has already been lost, but Rittershaus advocates surgical intervention to relieve the patient of the tormenting symptoms of ileus, and if possible to resect the necrotic part, although both of his patients succumbed shortly after such an operation.

78 **Consequences of Temporary Occlusion of Ureter**—Rautenberg's experiments were made chiefly on rabbits Temporary occlusion of the ureter was invariably followed by increasing atrophy of the kidney substance, a progressive degenerative process terminating in chronic albuminuria and death Dogs and cats seem more resistant

79 **Nerve Grafting for Peripheral Facial Paralysis**—Bernhardt's study of this subject from the standpoint of the neurologist suggests a number of points useful to bear in mind in attempting such an operation His analysis of the published cases shows that long duration of the paralysis is not a *contraindication*

Münchener medizinische Wochenschrift.

80 (LIII No 30) *Hot Water Alcohol Disinfection in Obstetrics and Abdominal Surgery—Ueber den Wert der Heisswasser Alkohol Desinfektion für die Geburtshilfe wie für den Wund Schutz von Bauchwunden. O v Herff
81 *Erfahrungen in der Behandlung der spinalen Kinder Lähmung (paralysis) O Vulpius.
82 Zur Kenntnis der Diphtherie. G Salus
83 New Terms for New Conceptions in Immunity, etc—Allergie C. v Pirquet.
84 Ueber Formen und Ursachen des Infantilismus G Anton
85 *Ueber das Westphalsche Phänomen bei kruppöser Pneumonie der Kinder (in children) N A. Kephallinos.
86 Poppy Capsules—Ueber Mohnkapseln Tischler
87 Bilateral Abducent Paralysis with Intense Pain in Back of Neck, after Spinal Anesthesia.—Ein Fall von doppelseitiger Abduzenslähmung verbunden mit aussergewöhnlich heftigen und lange anhaltenden Nackenschmerzen nach Rückenmarksanästhesie. M Landow
88 Ueber 2 Fälle von epidemischer Genickstarre (cerebrospinal meningitis) Broer
89 Ueber Blutdruckmessungen (measurement of blood pressure) B Fellner and C Rudinger
90 Die Elektrotherapie der Kreislaufserkrankungen (cardiovascular affections) L Raab (Concluded)
91 To Send Material for Examination.—Wie sollen Untersuchungsobjekte eingesandt werden? H Durck.
92 *Relations between Cancer and Tuberculosis.—Die Beziehungen zwischen Krebs and Tuberkulose. W Weinberg

80 **Hot-Water-Alcohol Disinfection in Obstetrics and for Protection of Abdominal Wounds**—It has been von Herff's experience at Basle that the Ahlfeld technic of hot water alcohol disinfection is admirably adapted for obstetric practice and also as a preliminary to laparotomies In 5,000 maternity cases during the last five years in which it was used, fever was observed in a total of 15 7 per cent from all causes, in 8 2 per cent it was of puerperal origin The total mortality was 0 7 per cent and the *mortality from puerperal fever* was 0 09 per cent, while it was zero in the cases that developed in the institution The alcohol shrivels the skin and tans it, as it were, preventing the escape of germs, and reducing the possibility of self infection from the vicinity The results of this method of disinfection have been so excellent in his experience that he considers himself not only justified, but bound to recommend this simple technic in the warmest terms to others

81 **Principles of Treatment of Spinal Paralysis of Children**—Vulpius' article was the opening address on this subject at the Lisbon congress The first requisite of treatment is to render an orthopedic apparatus unnecessary Arthrodesis may be all that is possible in cases of total paralysis of all the muscles moving the joint when the remains of function in the muscle are insufficient to prevent flail action of the joint He has performed this operation on the ankle, knee and shoulder but never on the hip joint, elbow or wrist The joint is opened and scraped to expose and to freshen the bone substance at a number of places, the surfaces being left irregularly grooved A silver wire is used to fasten the shoulder, but no fixation is used for the other joints, except immobilization in a plaster cast for at least three months The result, especially with the shoulder, he states, is very good The only ultimate drawback is the occasional consecutive scoliosis In partial paralysis, tendon grafting is wonderfully effective When possible he resects and transplants the entire muscle or tendon If only partial transplantation is possible he cuts the muscle up into its belly to obtain the strongest possible hold He prefers "descending" transplantation, that is, he draws down the functioning muscle to the intact, paralyzed muscle It is best to utilize muscles that have the same function as the defective ones, but this is comparatively unimportant, extensors can be transplanted on flexors and *vice versa* As a rule he sutures tendon to tendon, and refrains from periosteal fixation of the transplanted tendon when convinced of the adequate strength of the paralyzed tendon He avoids the use of artificial silk tendons, as this leaves a foreign body and brings complications Careful exposure of the tendon to be transplanted, carried up to its insertion, insures ample length even in case of periosteal fixation The complete cure of the paralysis was obtained *only in particularly favorable cases, but great* improvement was constantly obtained, and this improvement was permanent in the majority of cases In conclusion he warns against a blind, one sided application of tendon grafting, while proclaiming that the treatment of paralysis has become an especially grateful field for orthopedics

85 **Westphal's Sign in Croupous Pneumonia.**—Kephallinos found the knee jerk abolished in 49 2 per cent of 65 children with croupous pneumonia This occurred in some instances at a time when the lung findings were still dubious In 12 cases in which the date of the return of the reflex was noted it was observed in 6 on the day of the crisis, in 4 on the following, and in 2 on the second day He thinks that this loss of the knee jerk may be found a valuable diagnostic sign

92 **Relations Between Cancer and Tuberculosis**—Weinberg has been able to collect statistics in regard to the prevalence of tuberculosis in the families of persons dying of cancer in Stuttgart and vicinity The tabulated findings speak decidedly against the assumption that the relatives of cancer patients are affected with tuberculosis more than others His figures include the years from 1773 to 1902 inclusive.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits or in the interests of our readers.

A TEXT BOOK OF HISTOLOGY By F R. Bailey A.M., M.D Adjunct Professor of Normal Histology College of Physicians and Surgeons Medical Department, Columbia University New York City Second and Revised Edition, Profusely Illustrated. Cloth. Pp 475 Price $3 50 net. New York William Wood & Company 1906

APPLIED BACTERIOLOGY, An Elementary Handbook for the Use of Students of Hygiene, Medical Officers of Health and Analysis Revised and edited by C G Moor M.A. F I C., with the Coöperation of R. T Hewlett, M D F R C P, D P H Third edition. Cloth. Pp 479 Price $3 00 net. New York William Wood & Company, 1906.

THE DOCTOR'S RECREATION SERIES In the Year 1800 By S W Kelley M D Being the Relation of Sundry Events Occurring in the Life of Dr Jonathan Brush during that year Vol III Cloth Pp 421 Price, $2.50 Akron Ohio The Saalfield Publishing Company

TOXICOLOGY The Nature Effects and Detection of Poisons, with the Diagnosis and Treatment of Poisoning By C M Riley M D, Professor of Chemistry and Toxicology in Barnes University etc. Third Edition Revised and Enlarged. Cloth Pp 215 Price, $1 50 net. Philadelphia P Blakiston s Son & Co 1906

COMMENTARI DI CLINICA MEDICA Desunti Della Morfolgia del Corpo Umano Prof. Achille DeGiovanni Direttore della Clinica Medica Generale Della Regia Universita di Padova Senatore del Regno Parte Speciale illustrata da figure E Tavole Vol Primo Paper Pp 420 Price L. 8 Milan Ulrico Hoepli.

THE NERVOUS SYSTEM OF VERTEBRATES By J B Johnston Ph D Professor of Zoology in West Virginia University, with one Hundred and Eighty Illustrations. Cloth. Pp 370 Price $3 00 net. Philadelphia P Blakiston s Son & Co 1906

THE MEDICAL STUDENTS MANUAL OF CHEMISTRY By R. A Witthaus A.M. M.D, Professor of Chemistry Physics and Toxicology in Cornell University Sixth Edition Cloth Pp 820 *Price,* $4 00 net. New York William Wood & Company 1906

AIDS TO GYNECOLOGY By A. S Gubb M.D M R C S late Resident Obstetric Physician Westminster Hospital Fellow of the Royal Medical and Chirurgical Society etc. Fourth Edition Cloth. Pp 136 Price, $1 00 net. New York William Wood & Company

HISTORY OF OSTEOPATHY and Twentieth Century Medical Practice by E R. Booth Ph D D O Cincinnati. Cloth Pp 410 Cincinnati Press of Jennings & Graham.

AIDS TO OBSTETRICS By S Nall, B A. M.B D P H., Cantab M.R C S Sixth edition Cloth Pp 145 Price $1 00 net. New York William Wood & Company

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Original Articles

THE ATTITUDE OF THE CLINICIAN IN REGARD TO EXPOSING PATIENTS TO THE X-RAY *

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In its relation to medical practice, one of the most remarkable things about the x-ray is the tardiness with which there was any realization of its power of producing very marked changes in other tissues than those superficially situated. So large a number of persons have for years been exposed to the action of the x-ray that it seems strange, indeed, that, while it is now known to have very decided and sometimes profound constitutional effects, the recognition of such effects by clinicians has come only after years of use, and chiefly because of purely empirical and even haphazard clinical observations. In fact, for some time after it became reasonably evident that it influences the general organism, many persons persistently doubted whether the general effects were actually due to the x-ray.

X-RAY AND METABOLISM

At present this doubt is thoroughly dispelled, for more extended trial with patients and with animals of the clinical effects of exposures, histologic studies of the tissues of human beings and of animals that have been exposed, and investigations of the influence of the x-ray on metabolism have all shown that it has in some instances, and particularly on some tissues, a most energetic and powerful effect. In spite of the continued and already extremely impressive accumulation of facts relating to this point, there is as yet, it appears to me, an insufficient appreciation of its importance to clinicians. With agents that are introduced nowadays for diagnostic or therapeutic purposes, it is customary, as a rule, to study the manner of action, to reflect carefully on the character of the cases in which the effects are likely to be useful and those in which they may be harmful, and particularly to determine all these points, as far as possible, by purposeful experiments before such agents are used freely with human beings. With the x-ray, on the contrary, the method that has been adopted has been to try its effect for both diagnostic and therapeutic purposes on all manner of conditions, and only gradually, largely by painful experience, to learn that it may have dangerous effects, and seems usually to have noteworthy general effects if the organs active in metabolism are exposed to its influence, while at the same time in this somewhat hazardous way, it has been empirically or by lucky chance learned that some general affections are benefited, some are not in any noteworthy degree altered, and some perhaps are harmed.

Partial justification for the risks that have been run may be found in the novel power of the x-ray to picture many conditions of the internal organs, when this, of course, had previously been wholly impossible. The manifestly great value of this from a diagnostic standpoint, and the fact that profoundly dangerous effects are unusual and other less dangerous but nevertheless deplorable results of its use are often unnoticed for a long time or have but an inconspicuous relation to the exposure to the x-ray, led to a rather natural and wholly humane desire to determine as widely as possible its value in diagnosis, and an empirical study of its therapeutic relations somewhat naturally followed this. It is not surprising that some of the evil results, sterility, for example, were long overlooked, for this effect is not one that becomes apparent readily, and it could with difficulty have been decisively attributed to the x-ray, were it not that, the possibility having once arisen, experiment readily demonstrated conclusively that exposures may produce it. The same is true to a less marked degree of nephritis, for this affection may run so silent a course as to have little evident relation to its cause, and, likewise, late toxic reactions as well as mild and rather indefinite early toxic reactions, are difficult to attribute clearly to the x-ray unless attention is carefully directed toward proving this point. Nevertheless, it can hardly be said, I think, that, because its manner of action was unknown, the empirical method of determining which cases were suited and which were unsuited to x-ray exposures was necessary, if an agent so evidently valuable was to be used at all. We are not, as a rule, in haste to experiment with human beings in regard to the effects of new drugs until we have determined whether or not they have noteworthy constitutional effects, and if they have such effects, which tissues in particular they influence, but in the case of the x-ray no extensive attempt was made to determine that it had general effects until remarkable results of its empirical use, partly favorable and partly disquieting, demonstrated that it actually has.

That the empirical and not the experimental method of study was first used with the x-ray is, I believe, much more largely the fault of those of us who are medical and surgical clinicians than of those who are specialists in the use of the x-ray, for in the first place, the latter in a large proportion of instances receive their patients from clinicians for the single purpose of having them exposed to the x-ray, the clinician being responsible for its use, while the x-ray specialist merely carries out the clinician's orders in a skilful manner, and in the second place, it is essentially the duty of the clinician, before any measures are recommended by him, no matter who conducts them, to determ [illegible] determine [illegible] the main features of its good [illegible]

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* Read in the Section on Practice of Medicine of the American Medical Association at the Fifty-seventh Annual Session, June 1906.

As has already been stated, we now have sufficient evidence of decided general effects, and there is no longer any question that we should, as far as possible, decide on its use in the same manner as we determine with other agents whether they shall or shall not be employed. It appears to me, therefore, to be of much importance to determine, as far as we may, the general nature of its action, in order that an agent that has already become so valuable, especially in diagnosis, may not have further discredit thrown on it through encountering dangers in its use that might have been avoided by proper study, and in order that its usefulness may be rationally extended into proper channels. A somewhat extensive series of studies of the effect of the *x*-ray on metabolism in various medical conditions that I have made in the last eighteen months, part of which I have described, part remaining as yet unreported, together with some investigations of others on the same point, have shown that the influence on metabolism is, in some instances, most violent, that it occurs even in normal persons, and that apparently when a general influence is clinically evident it is always associated with decided changes in metabolism. These changes in metabolism are due largely, if not entirely, to tissue destruction that occurs chiefly in those tissues rich in nucleoprotein, and they are evidenced most particularly by an increase in the total nitrogen output, with ordinarily a relatively large output of uric acid, purin bases and phosphates, the substances that indicate the degree of nucleoprotein destruction. Extensive histologic studies by various authors, among whom Warthin is most conspicuous in this country, show that the special tissues most severely affected are the bone-marrow, spleen and lymphoid tissues, the effect on these tissues being, indeed, so much more marked than on any others as to be almost specific.

My studies in metabolism have further pointed out some facts that were previously less clear or not at all evident and that are of very considerable clinical interest and importance. For example, they have shown that at times a single exposure of ordinary severity may have a most profound influence on metabolism and one that may show itself for many days afterward. The effect of an ordinary dose may, in fact, be more severe than the effect of a similar dose of any other therapeutic agent with which I am acquainted, and may either be extremely useful clinically or so dangerously violent as to hasten death, and perhaps even to cause it when it would otherwise have been avoided. I would note, also, that in one instance an exposure for an *x*-ray picture only eight seconds in duration, although actually a moderately severe exposure, produced so striking an effect in one patient (a case of unresolved pneumonia) that he excreted more than double the amount of nitrogen and nearly double the amount of chlorids that he had passed in equal periods previously, the effect in this case having been highly beneficial, but so violent that in some disorders it might evidently have been most dangerous. This point is of interest and importance, in that it demonstrates the possibility of occasional dangerous effects from the mere diagnostic use of the *x*-ray.

Further, I would direct especial attention to the suggestiveness of an observation that I made when studying the metabolism of a case in which a severe toxic reaction occurred. I have the records of three cases in which, after one exposure, there was a reaction so severe as to make the patient profoundly ill and in two of these cases death occurred while the third patient had a narrow escape. In only one instance was I personally responsible for the use of the *x*-ray. In two of these cases I was studying the condition of metabolism before the reaction occurred, and I continued the observations afterward, and was thereby enabled to determine that with the reaction certain marked changes occur that had not previously been noted and that help, I think, to make clearer the nature of this disturbance. The special features of metabolism in these cases I have described elsewhere and need not repeat, but the point that I wish to emphasize here is that in one of these cases it was clinically not clearly evident that the *x*-ray exposure produced the severe illness that followed it. Indeed, the careful clinician that had charge of the patient had not considered the probability that it was due to that cause, for the man had been more or less ill for some time, and it was rather naturally supposed that the increased illness was merely an accentuation of the previous condition and that it occurred at the time it did through pure coincidence. But the patient's metabolism showed the same peculiar changes as those seen in another case during what was clearly a severe and almost fatal reaction to an *x*-ray exposure, and I think, therefore, that there is little, if any, doubt that the added symptoms in the man under particular discussion were due to the *x*-ray.

I would also particularly note that this man received an intentional and direct exposure only over one arm from the elbow down, though the trunk was not screened, and hence he undoubtedly got a general exposure which, while distant, was nevertheless an exposure to the deeply penetrating rays. It was, however, mild and was of but five minutes' duration, the intensity of the general exposure having certainly been less than is commonly used in their diagnostic or therapeutic exposures. In addition to this, I would draw attention to the fact that the other patient whose metabolism I studied at the time of the toxic reaction, and who showed profound clinical symptoms and violent disturbance of metabolism received what Dr. Pancoast tells me was the mildest exposure he had ever given.

It seems to me that the moral to be drawn from these cases is that we must be on the watch for mild or moderate symptoms, as well as for severe ones after *x*-ray exposures, and must be prepared to determine fairly and justly whether unfavorable symptoms of some degree are not much more commonly due to the *x*-ray than we have hitherto believed and whether their relation to the *x*-ray has not been obscured by pre-existing disorders, which instead of the *x*-ray, have been held responsible for the increased symptoms. I think most conscientious and conservative *x*-ray specialists already believe that, at least to some extent, this is true, and it appears to me to be highly probable, for, as I have said, even extremely mild exposures may produce very great alterations in metabolism, and it is but natural that this might not uncommonly cause unfavorable symptoms in persons that already had serious disease.

CARE NEEDED IN USE OF X-RAY

In consideration, then, of the various facts that we have learned in recent years I believe that we should recast our attitude in regard to the use of the *x*-ray even more decidedly than we have done. As far as I am able to judge, the great majority of clinicians look on the *x*-ray, first of all, as an agent that makes valuable pictures and that does good in some diseases, and only secondarily and somewhat distinctly as an agent that has powers for harm and has been known to do harm. The attitude that appeals to me as a suitable one for the careful clinician to assume is that the *x*-ray is, first of all, an agent that has as active an effect on the organism as has a powerful dose of medicine, that it is not to be used at all, therefore, unless there is some reasonably evident useful purpose in view, that with those that are seriously out of health it is to be used at first tentatively and with brief and mild exposures, that in case fairly definite contraindications can be found to exist persons that present such contraindications shall not be exposed at all, unless cogent reasons for doing so seem to outweigh those to the contrary, and, finally, that the clinician should not order a patient to be exposed to the *x*-ray unless he has taken measures of a simple and reasonable character to determine that there are no easily recognizable conditions present that appear to contraindicate its use, or, if such are present and he still desires to use it, he should acquaint the *x*-ray specialist of the fact of their presence, in order that especial caution may be exercised. Furthermore, the clinician should know that the individual *x*-ray specialist to whom he refers patients protects habitually, as far as this can be done, all parts except those that require exposure, by properly screening them.

These rules may appear somewhat severe, in contrast with the easy freedom with which the *x*-ray has long been used, but I am sure that most thoughtful *x*-ray specialists will agree with me that they are, in the main, proper, and I know that a limited number of clinicians do nearly all these things already. I may seem extreme in having purposely constructed my statements so that they mean that a physician or surgeon should not lightly and without considerable knowledge of his patient have him exposed to the *x*-ray for either diagnostic or therapeutic purposes. I believe that this is a proper attitude, but I would hasten to explain that I do not wish to exhibit or to excite in others an hysterical fearfulness of the *x*-ray or the feeling that the dangers are imminent and ever present. I shall perhaps make myself clearer through an analogy with the use of anesthetics. There are dangers associated with their use, and no one thinks of recommending that they be used unless he has a clearly defined purpose in doing so. Even with persons apparently well, it is a general custom to determine first that the patient is not the subject of any disease that renders the use of an anesthetic possibly or certainly dangerous to a degree that makes one question the wisdom of using it at all with him individually, and if such disease be found and it is still decided to be best to proceed both surgeon and anesthetizer do so with particular caution. Such precautions are taken almost automatically nowadays and no one considers them unreasonably burdensome.

What I have said in regard to the use of the *x*-ray amounts to much the same thing, merely modified somewhat to suit the different conditions. I would not urge that the *x*-ray be used, each time that it is employed with ponderous and fearful thought of its dangers and that it be used only when one unwillingly feels that he can not escape it, but I would urge that its unnecessary use be discarded, and particularly its repeated use when one exposure has given all the information that is likely to be gained and when further exposures are undertaken largely from restless diagnostic curiosity. With cases in which rapid diagnosis of fractures or the like is desired or when a small area is to be treated for epithelioma or other superficial disease I would not advise hesitation in its use or recommend any especial precautions, except the extremely important precaution of limiting the exposure as carefully as possible to the area that is intentionally exposed. It is, I think, part of the clinician's duty to his patient to determine that the *x*-ray specialist that does the work recognizes the necessity for habitually doing this. Even with robust persons it is desirable, simply because it is always unwise to administer to any one an unnecessary dose that has an active and ill-understood effect on metabolism, and this is still more true if repeated exposures are given. With persons that are already seriously out of health it is even more urgently desirable, as is emphatically illustrated by the case that I have noted, in which a severe reaction followed an exposure of the lower part of one arm, and in which this could probably have been largely or entirely avoided had the other portions of his person been protected.

In cases that require extensive exposures, even though these be only over the extremities, and even though the trunk can be protected, we are treading on somewhat more dangerous ground and should go somewhat more cautiously. I have seen one case of pernicious anemia in which an exposure over the thighs produced a reaction that was the cause of a violent access of symptoms soon ending in death. The bone marrow is known to be one of those tissues that exhibit peculiar sensitiveness to the *x*-ray. Hence, when large areas of marrow are exposed, bad results may readily follow. In healthy persons, the possibilities of harm are so distant that they probably do not deserve very serious thought, but it is desirable that before exposure an examination of the patient, which should include an ordinary examination of the urine and some consideration of the general features of his case, should have furnished evidence that he is reasonably healthy. If he is distinctly out of health, I think that the indications for the use of the *x*-ray, even for diagnostic purposes, should be definite and at least moderately forcible before it is used over extensive areas. If he presents certain forms of disease that I shall mention soon, I think the *x*-ray should be avoided, if possible, and, if it is employed at all, it should be used with great caution and under the stress of urgent indications.

In the case of exposures of the trunk, all I have just said may be applied with some added emphasis. Healthy or moderately healthy persons are not at all likely to be harmed by them, but patients should not have them given in the first instance or have them repeated, unless there is good occasion for doing so, and unless it has actually been determined that these persons are not seriously out of health. With persons whose health is decidedly disturbed, there should be serious consideration of the propriety of extensive exposures before they are undertaken, there should be a tendency to avoid them unless they are very distinctly indicated, and one should have as clear a knowledge as possible of the patient's general condition before ordering the exposure. I have some doubt, even, of the propriety and safety of the use of plates and the fluoroscope in the diagnosis of cardiac and pulmonary disease, in case the patient has much circulatory incompetence or a noteworthy degree of infectious toxemia, and in such conditions I especially question the wisdom of the frequent and often rather regardless use of this method that has not uncommonly been adopted in recent times by enthusiasts. Personally I use the *x*-ray for diagnosis in both cardiac and pulmonary disease, but I use it only [illegible] it seems especially desirable because other methods are insufficient, and in employing it I try to use well-considered caution.

In bringing together the limitations to be placed on the use of any measure, one escapes with difficulty, if at all, the danger of over-emphasizing the evils. I have tried to avoid this, but, lest I have not succeeded in doing so, I would again insist that my purpose has not been to urge a general restriction of the use of the *x*-ray in all sorts of cases, but rather to plead for its use in a manner that guards, as far as possible, against dangers that are, in occasional instances, known to be great and that are probably not uncommonly encountered in milder and less evident forms. I have, further, desired to urge that occasionally, in cases that past or future experience may lead one to think especially unsuitable, its use should be discarded altogether or should be undertaken only with caution and after a just balancing of the good and evil chances has made the latter appear to be the lesser. I have insisted on caution with all those that are seriously out of health, unless the exposure is limited to a narrow area, and I think reasonable conservatism justifies this view. A certain degree of freedom must necessarily be exercised in deciding which cases require especial caution and much more knowledge and experience will be needed before we can be generally accurate in this regard.

DISEASES THAT SUGGEST SPECIAL DANGERS IN USE OF X-RAY

There are at present, however, certain points in our knowledge that indicate that the most noteworthy dangers are to be expected in those diseases in which there would be particular difficulty in completely disintegrating and in excreting the products of the tissue breakdown that the *x*-ray causes, and two groups of disorders seem to deserve more careful consideration in this respect than any others with which we are as yet familiar.

One of these has become pretty well known. Clinical and pathologic observation has shown that nephritis may follow *x*-ray exposures, and the enormous increase in excretion that sometimes follows exposure makes it evident that the kidneys are likely to suffer. From the occasional occurrence of nephritis, therefore, as well as from observations on metabolism, we must conclude that with those patients who already have nephritis or those whose kidneys are under especial strain *x*-ray exposures should be guardedly used or excluded.

The other group has been suggested to my mind by the fact that all the cases in which I have seen evidently serious results were already subjects of a considerable degree of toxemia. It would seem highly probable that a person already struggling with a toxemia would be more likely than a normal person to suffer ill effects to his organs of metabolism, as well as to his kidneys, if in addition to his previous burdens, he were suddenly required to complete the disintegration and excretion of a large mass of broken-down tissues. It appears to me, therefore, that those who are to any noteworthy degree toxic from metabolic disorder or infectious disease should not be exposed without great caution and without urgent reasons.

It is probable that a third group with which we should proceed very cautiously is constituted by those cases that are very anemic. The tissue-destroying effect of the *x*-ray is so largely exerted on the blood-building organs that it might readily cause serious embarrassment if these organs are already insufficient, and I have notes of two patients with pernicious anemia who became profoundly, indeed, fatally, ill after one exposure. On the contrary, I know two patients with the same disease that were benefited, one very greatly and rapidly benefited, by *x*-ray treatment, and it is possible that in some circumstances ordinary doses may destroy or at least seriously damage large portions of the blood-building organs, while in other circumstances the same dose may influence them favorably. It is possible, too, that toxemias may at times be favorably influenced, and it must likewise be admitted that the effect is not damaging in every case of nephritis. Nevertheless, in our present limited state of knowledge, it seems wise to be exceedingly cautious with cases of nephritis, of marked toxemia, and of decided anemia, and particularly with those cases in which there is pronounced anemia in association with a distinctly toxic state. I believe that further clinical, metabolic and other accurate studies of the contraindications, as well as of the indications, for the use of the *x*-ray constitute a valuable field of investigation, and it seems to me to be extremely desirable that clinicians make it a general custom to observe patients very carefully after *x*-ray exposures, in order to determine whether noteworthy after-symptoms seem to be common even though the patients appear to be doing well under the exposures, and particularly to make careful studies of the urine in a large number of cases. The result of such observation would not be to throw further discredit on the *x*-ray, but to make it possible to use it more rationally and with more logical judgment.

I may not improbably be met with the objection from various sources that as yet there are but a limited number of dangers known to be associated with the use of the *x*-ray and that the number of cases known to have been seriously damaged is small. I think this objection may be met with sufficient force by the statement that the dangers of the *x*-ray have been recognized for only a comparatively short time, and that there has consequently been relatively little opportunity to determine how great and how numerous they are, and that, in spite of this, a very considerable number of cases that have been injured have been described. The histologic studies and the studies of metabolism that have thus far been made make it wholly rational to expect that the dangers are more frequent than we yet know, and the standpoint that appears to me to be wise and proper is not to belittle the dangers and attempt blindly to escape them, but to determine in whatever ways are open to use what they are and how they may be avoided.

THERAPEUTIC VALUE OF THE X-RAY

I have thus far dealt almost entirely with the points that should limit or discourage the use of the *x*-ray and I have done this purposely because, while these points are still hazy, they are, nevertheless, more definite and demand more immediate attention than those that relate to new indications for its use. Still, as I said earlier, one should have in mind not only the determination and restriction of the dangers, but also the discovery of new channels of usefulness. An agent that has a profound effect on metabolism is not likely to exercise this effect solely in an evil way if proper opportunities for doing good with it are sought out. It is evident already that in leukemia and in some other general disorders metabolism may be stirred up by the *x*-ray to the accomplishing of at least transitory good, and it appears to me probable that some other disorders of metabolism not yet known to be benefited by the *x*-ray might be improved through its use Up to the present my observations in this direction, which have been limited in number and have been undertaken only in cases that seemed to be proper to subject to exposures, have remained of little or no therapeutic value, except in one condition, in which they have been quite encouraging

I have had the *x*-ray used in two cases of gout, a disease that has repeatedly been treated in this way The clinical results in other instances, as well as in these two cases, have, I think, been doubtful or discouraging The studies of metabolism that I made with Dr Fife in these two cases, during the time that they were under treatment, showed that the exposures had no influence in stopping or warding off the disturbances of metabolism that are associated with the attacks Likewise, in two cases of diabetes that were subjected to this treatment no changes of consequence could be demonstrated in the clinical condition or in the excretion of sugar and acetone bodies I tried the effect of the *x*-ray, also, on a case of persistent headache associated with a deposit of oxalates in the urine, and, while the increase in general metabolism that has usually been observed was noted in this case, there was no change in the amount of oxalic acid that was determined to be present and the clinical condition was not altered.

In several cases of unresolved pneumonia I have had promising results I used the *x*-ray in these cases because I believe that it probably acts chiefly through increasing the velocity of some ferment processes and because in unresolved pneumonia it is probable that the ferment processes that should and ordinarily do dissolve the exudate are ineffectual In three such cases the clinical effect was a rapid clearing up of most or all the signs, and in two of these cases in which Dr Pemberton and I studied the metabolism we observed a tremendous influence that was coincident with the improvement in the physical signs, the metabolic alterations having been of much the same quality and degree as those that are seen at the time of an ordinary successful crisis These latter results are, then, encouraging While the others mentioned are not so, I believe that there is certainly constructive work to be done in searching out the therapeutic relations of the *x*-ray, and not simply the more destructive type of work that I have chiefly discussed earlier I think this is particularly true if the work be planned with the view that this agent has a lively influence on metabolic processes, particularly on those that occur in the spleen, the lymphatic tissues, and the bone marrow, and if it be carried out with a calm but definite appreciation of the restrictions that should be placed on any such experiments in therapeutics

DISCUSSION

Dr. E. J Brown, Decatur, Ill., said that the question of deciding which patients are the best subjects for the *x* ray is one very difficult to answer He did not know of any criterion by which to decide this except by trial in each individual case He had given 150 exposures to one patient without any ill-effect Another patient, who had been in bed for seven years with paralysis agitans, was successfully treated after 30 exposures for epithelioma of the face. A patient with lupus after 200 exposures showed a gain in weight. In another patient a small epithelioma of the ala of the nose, after eight or ten exposures, and without any cutaneous burn, was entirely cured. But inside of a year this patient developed a facial paralysis and general ophthalmoplegia with paralysis of the branches of the fifth nerve and with marked trismus The *x* ray experts to whom he had related this case regarded it as simply a coincidence and as being due to an old otitis media, from which the patient suffered

Dr. J C Price, Scranton, Pa, said that absolute precision is necessary in these matters In his own experience he had exposed a number of patients with nephritis and with no untoward results The urine had been watched and studied most carefully In one case, that of a patient with a chronic interstitial nephritis, there was a wonderful improvement In another case of a woman with a large carcinoma of the breast, there were exposures for eight months and an apparent recovery followed At the time of beginning the exposures the urine was loaded with albumin and there were a great many casts, as well as many of the waste products in the urine A gradual improvement followed the use of the *x* ray, and after its discontinuance she lived four or five years He said he would like to know the results of the *x* ray in leukemia

Dr. D L. Edsall, Philadelphia said that he did not at all mean to indicate that he considered that persons with certain diseases are to be denied the use of the *x* ray absolutely He merely meant that cases of nephritis, as well as those with other diseases, should never have the *x* ray used unless it seems distinctly important that it should be used If there are indications for its use and, at the same time, contraindications, careful consideration should be given to the patient's condition, and the question should be decided, in accordance with the individual case, whether the advantages of using the *x* ray are greater than the possible disadvantages His objection had been raised chiefly against the common attitude of the profession, in which, until very recently, there has been little consideration given to the danger of the *x* ray producing serious damage besides the possible burns that have long been recognized Recently it has been clearly shown that dangerous general reactions may occur, but in spite of this, only a few days before, for example, at a meeting of prominent medical men, Dr Edsall had heard several persons speak in a very easy manner of exposing patients to the *x* ray daily for various purposes, such as locating the exact position and the progress of foreign bodies in the intestine, when very little was to be accomplished by such repeated exposures except to satisfy diagnostic curiosity The *x* ray should be used guardedly, and always with the feeling that one is using a very powerful agent, and one should know as exactly as possible the condition of the patient before resorting to its use If contraindications are present, avoid its use entirely, if possible, but if it seems important to use it, do it very guardedly

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THE EFFECTS OF PERICARDITIS ON THE HEART *

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The few minutes allotted to me make it impossible to do more than point out the most important effects of pericarditis on the heart and their significance This subject, however, is not unimportant, for the lesions of pericarditis are, much oftener than they should be, undetected by practitioners Chronic pericarditis or pericardial adhesions rarely can be detected, fibrinous pericarditis should be in a large majority of cases, but I am sure is not, and pericarditis with liquid effusion ought to be recognized always These lesions are overlooked especially because they are secondary in almost all cases to an infection which produces other symptoms that are the most striking and hold the attention of the patient and physician

Whenever the visceral pericardium is inflamed deeply the muscle beneath is involved also However, it is rare that the myocardium is greatly weakened by an acute pericarditis Moreover pericarditis is usually not general and therefore, comparatively few muscle fibers are injured. A quickened and sometimes irregular pulse is caused by irritation both of the pericardium and myocardium due to such inflammation

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Pain or oftener discomfort or distress in the region of the heart is a common symptom of pericarditis and is due to the constant rubbing of a denuded surface with each throb of the heart Tenderness is more frequently observable than pain and is greatest when the costal pericardium is inflamed, although not always wanting, when the visceral surface is the seat of inflammation

A friction fremitus is felt and friction sounds are heard both when a rough abraded pericardium is rubbed by the moving heart and when under the same circumstances the pericardial surfaces are pulled asunder or loosened from one another, though imperfectly glued by a fibrinous or tenacious sero-fibrinous exudate of small amount It is important to remember that friction sounds are rarely transmitted far and are, therefore, usually heard only over the heart or a portion of it This fact is an aid to diagnosis and in sharp contrast to the usual distribution of endocardial murmurs Most frequently they are heard at the base of the heart. Deep inspiration which often makes a pleural rub plainer usually lessens pericardial friction sounds However, there are numerous exceptions to this general rule I need not describe to this audience the character or differences of these sounds and endocardial murmurs

In a large number of cases of pericarditis, resolution occurs when the inflammation is fibrinous and the pericardium is restored rapidly to a condition of health or only slight and harmless adhesions or trivial thickening of a surface is left as a mark of the disease

When a thick fibrinous exudate is formed and especially when a considerable serous one is, the heart sounds are distant and weaker than is normal, but friction sounds and fremitus are wanting The apex beat also is usually undiscoverable. If the exudate is a thick fibrinous one, the area of precordial dullness will be increased, but will not change its shape or position materially when the patient changes his position. But this is not true when there is a considerable liquid effusion, for then the shape and size of the large area of precordial dullness will change as the patient shifts his position It will be relatively small and will approach normal shape if the patient lies on his back, but if the patient sits erect will assume its characteristic triangular shape with the apex of the triangle at the base of the heart The liver also is usually displaced downward more or less because of the weight of the distended pericardium In this position the apex beat of the heart may be seen or often vaguely felt, but not at the extreme left and lower angle of the area of dullness Moreover, the apex beat will shift somewhat from side to side as the patient leans from right to left, for, with the swaying of the patient's body, the heart is capable of some to and fro motion in the distended pericardial sack.

Even more striking than these effects of pericarditis with effusion are dyspnea, cyanosis, an anxious countenance small, feeble or irregular pulse and distended cervical veins These symptoms are most marked when the effusion is rapidly developed or is very great The cause of them is easy to comprehend Dyspnea and cyanosis are partly due to compression of the lungs by the enlarged pericardium, but much more to the defective action of the heart which its compression causes, neither of the cavities of this organ can expand fully and they can not contain a normal quantity of blood Necessarily, therefore, the blood will be propelled with diminished force Moreover, the auricles and venæ cavæ which are soft and easily compressed are so squeezed as to produce the passive congestion commonly noticed in the distended veins of the neck and sometimes in a distended and pulsating liver Although the pericardium when enlarged presses on the bronchi, they are rarely compressed enough to cause dyspnea because of their rigid walls But the weight of the pericardium impedes the diaphragm in its movements and is another factor provocative of dyspnea

A distended pericardium is said sometimes to compress the esophagus so as to make swallowing uncomfortable. Very rarely, too, pressure on the recurrent laryngeals paralyzes the vocal cords That these effects are very infrequently observed is, I am sure, true because I have not observed them, although I have seen many cases in which the pericardium was very greatly enlarged by effusions

When the pericardium is filled with fluid, not only is the area of precordial dullness increased in front, but one may be made in the lower part of the interscapular space on the left side, and at the same place tubular breathing can be heard These latter changes are due to compression of the lung

The *x*-ray is a help in detecting pericardial effusions The shadow viewed from in front cast by them is more globular than the normal heart and the left border does not pulsate as the normal heart does Viewed from the side, the triangle between the heart, the vertebral column and the diaphragm, which normally is a bright space, is obliterated by the shadow of the exudate which fills it. Fluctuation in shape and in position of the shadow cast by the enlarged pericardium is also readily seen when the patient changes his position.

The diagnosis of fibrinous pericarditis is often difficult, for friction sounds are not constantly produced, indeed, the commonest symptom is tenderness, and occasionally a diagnosis is justified when there is a good cause for pericarditis and the intercostal spaces over the heart are distinctly tender

In a small majority of cases in my experience, however, no symptoms can be found to suggest the trouble

Only when pericarditis complicates a disease which already has caused great enfeeblement, such as a cachexia Bright's disease or endocarditis, does the myocardial derangement produced by a fibrinous inflammation endanger life It may then cause very rapid or irregular pulsation and often progressively feebler beating until the heart stops, exhausted

On the other hand, if there is much serous effusion, a diagnosis is not difficult The effects of effusion on the heart make plain the basis of a diagnosis When an effusion is small or very moderate, the increased area of dullness is often wrongly ascribed to cardiac dilatation This diagnosis seems more plausible because of the rapidity and feebleness of the heart sounds and feebleness or absence of the apex beat The shape of the area of dullness and the partial or total obliteration of the normal right angle or comparatively sharp one between the right border of cardiac dullness and upper border of liver dullness which an effusion causes should help greatly to a correct diagnosis However, as most patients who suffer from pericarditis are examined in a recumbent posture, these physical changes are not very evident. Under these circumstances, also, precordial tenderness is always a great aid to a diagnosis

In children and in adults when the chest wall is thin the edge of the heart can be felt through the intercostal spaces and especially when it is dilated and hypertrophied If a finger is drawn along an intercostal space from the axilla to the sternum and at the same time pressure is made from point to point along this course, it meets with marked resistance at the edge of and over the heart, but when the pericardium is filled with fluid less resistance is felt and sometimes even a sense of elastic resistance is experienced

Mediastinal tumors are another source of error, for they also often cause enfeeblement or disappearance of the apex beat and an extensive area of dullness in the center of the chest However, its shape is less regular and not that which I have described as characteristic of pericardial effusion Moreover, it must not be forgotten that mediastinal tumors sometimes produce a pericardial effusion and then a commingling of symptoms of both will be found, which will make a diagnosis difficult and sometimes a complete one impossible I have in mind two such cases, in only one of which was a complete diagnosis possible In the other the heart was encapsuled by a mediastinal tumor and in the pericardial cavity the heart was compressed by an effusion which could not distend the thick rigid capsule about it.

Of the conditions which make difficult the recognition of a pericardial effusion, encysted pleurisies are always mentioned. It is easy to imagine the various symptoms which they might cause, but in my experience they are rarely located where they can be confounded with a pericardial effusion I do not recall a single instance

I need not say that the character of the fluid in the pericardium can be determined only by aspirating some of it While with rare exceptions it is serous, it may be bloody or purulent

There are another series of effects of pericardial inflammation on the heart which I have not yet mentioned I refer to the effects of adhesions between the pericardial surfaces Usually these are slight and about the base of the heart They rarely interfere with the function of the heart to a serious or even noticeable extent However, when they are developed in those who are cachectic or enfeebled by some chronic disease, they may cause the usual symptoms of asystole, symptoms which, as a rule, are slowly developed But no symptoms characteristic of pericardial adhesions are produced

When adhesions are extensive over the anterior surface of the heart involving the apex or its neighborhood as well as the base, and when the pericardial inflammation which produced them has also caused unusually firm fixation of the costal pericardium to the sternum and adjacent ribs, modifications of the phenomena produced by the heart will be caused which make a diagnosis possible These phenomena are (1) systolic retraction of the apex and intercostal spaces over the heart and often of the lower end of the sternum and epigastrium, (2) diastolic projection of the chest, (3) diastolic collapse of the cervical veins and (4) a fixed, unchanging area of cardiac dullness in every phase of respiration

The first of these symptoms is due to the transverse contraction of the ventricles of the heart. This would be better understood if we were to make a diagram in which the heart is represented as fastened firmly to the chest by its anterior surface and to the diaphragm below often to the spine behind If now the transverse diameter is lessened the precordia must be drawn in and if the diaphragm is adherent to the heart it will be pulled up and will help to draw in the epigastrium The lifting apex beat normally is caused by the attempted straightening of the arch of the aorta when the blood is forced into it, and lengthening of the ventricles when their transverse diameter is lessened during systole But when the pericardium and heart are fastened firmly to the wall of the thorax, straightening of the aorta is impossible and lengthening of the ventricles causes the apex to descend against the diaphragm not to make an outward thrust against the chest wall

It must be remembered, however, that similar though usually less pronounced systolic retraction is sometimes caused by adhesions only at the base of the heart, and by atheroma of the aorta and stenosis of the aortic valves

A diastolic projection of the chest is due to its assuming its normal position after retraction and to the simultaneous distension of the ventricles with blood

The diastolic collapse of the cervical veins is doubtless due to these same causes, for the sudden production of negative intrathoracic pressure on the great veins in the chest when the thorax expands during diastole and simultaneous emptying of the auricles causes a rapid emptying of the large veins near the heart during diastole.

Of all these symptoms the most trustworthy is the unchanging shape of the area of precordial dullness during inspiration and expiration That this condition must exist seems self-evident when a pericarditis and an extra pericarditis fasten the anterior surface of the heart to the wall of the chest, for then it is impossible for the left lung to overlap the heart to an appreciable extent

But cardiac synechia, partial or extensive, is rarely recognized during life, for the conditions which will produce the symptoms just enumerated are not common

Asystole may be expected to develop sooner or later when there are extensive pericardial adhesions but if they are formed in early adult life and the heart is not soon after their formation overtaxed, compensation will be affected by cardiac hypertrophy and functional adequacy may be perfect for many years At autopsy I have seen numerous examples of this Therefore, except in those who are enfeebled by a chronic disease, or in those who are young and who will tax their heart to keep pace with growth, pericardial adhesions are not very dangerous to life However, even if the adhesions are well compensated for a severe acute illness may break this compensation and precipitate a condition of asystole Moreover, when pericardial adhesions complicate chronic valvular disease of the heart, as they often do, both the peri and the endocardial disease arising from the same infection and usually from rheumatism, the adhesions will help to increase dilatation and hypertrophy and to hasten asystole Under these circumstances a lesion, which from the extent of the involvement of the valve might not be grave, becomes so

Pericarditis is not generally a fatal lesion It is variously estimated that from 50 to 75 per cent of all cases recover Rheumatic pericarditis, as compared to that caused by other infections, is benign Hemorrhagic and purulent pericarditis is almost uniformly fatal always so unless recognized and successfully treated

About one-third of all cases of pericarditis are serofibrinous about one-sixth are hemorrhagic or purulent one-twelfth tubercular in approximately the same number there is total synechia but in one-third there are adhesions between part of the pericardial surface

A rapidly developed effusion is dangerous but recovery can be effected or life prolonged even in a majority of these cases by aspiration and treatm

A large, slowly-developed effusion is not as threatening or immediately dangerous, and a small effusion is of no greater gravity than fibrinous inflammation

A prognosis must be influenced largely by the condition of the muscle of the heart at the time of the pericarditis Chronic alcoholism and the cachexias of cancer, Bright's disease, and tuberculosis, make slight the possibility of prolonging life Pericarditis in these cachexias is usually due to a terminal infection and is often the immediate cause of death It is also a much more serious complication of pneumonia than of pulmonary tuberculosis and a very grave complication of sepsis

As might be expected, it is most dangerous in the earliest and latest years of life

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ANGINA PECTORIS—TRUE AND FALSE *

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True angina pectoris is, comparatively speaking, an uncommon condition The mechanism involved in its pathogenesis is imperfectly understood, and the views found recorded on the subject in medical literature are, for the most part, hypothetical Two facts, however are generally accepted First, that structural changes of the cardio-vascular system are present in the immense majority of cases, the chief among them being arterial sclerosis, especially of the coronaries, aortic regurgitation, aortitis (syphilitic?), hypertrophy, aortic aneurism, adherent pericardium and myocardial degeneration—fatty and fibroid These lesions may be variously combined and the instances in which a certain grade of calcification of the coronary arteries and root of the aorta, associated with more or less myocardial degeneration, has not been found in evidence postmortem, are of rare occurrence

The second fact which passes current is that irritation or disturbance of the cardiac sensory nerves exists Unfortunately most of the leading theories concerning the nature of angina attempt to explain the cause and seat of the pain, their authors forgetting that this symptom is but one of a group of characteristic features While, therefore, a universally acceptable theory of the pathogenesis of this syndrome lies before us in the future, yet if the few isolated facts, which appear to be amply attested either by clinical experience or postmortem observations, were to be brought into harmonious union, our conception of the symptom-group under discussion would doubtless become less vague and indefinite than it has been hitherto

ETIOLOGY

Multiple views are held regarding the question of the immediate cause or causes of the precordial paroxysms and to refer briefly to the more important ones will serve my purpose In the first place, the theory that angina vera is a neuralgia either functional or of neuritic origin, is untenable, since it neither accounts for the mental anguish and other associated phenomena (as pointed out by Osler) nor for the cases of *angina sine dolore*

The somewhat analogous clinical phenomena presented by intermittent claudication, in which the principal pathologic condition is also arteriosclerosis, are believed by some writers to throw a welcome side light on the mode of origination of angina in some cases at least Neurologists and clinicians concur in the opinion that the pathogenesis of intermittent claudication embraces two leading factors, namely, arteriosclerosis and angiospasm of the affected blood vessels, suddenly induced by the usual exciting factors Typical cases, which later developed angina pectoris with fatal termination, have been reported by Charcot and others.

In speaking of the relation of angina pectoris to arteriosclerosis, Osler remarks, "the pain in angina pectoris is *sui generis,* unlike in intesity any known variety, and while its association with the coronary artery sclerosis is unquestionable, there is something additional, some other element for which, as yet, we have no explanation "[1]

There are not a few eminent observers who seriously question whether the vasomotor spasm affecting the blood vessels in angina pectoris stands in the relation of a causative factor Says Allbutt,[2] "Are not secondary vasomotor events translated from cause to effect?" A Morrison[3] from an interesting series of sphygmograms infers that constriction of the peripheral vessels either during the course of or after an attack of angina is often the result of the attack, rather than the cause. Hill and Barnard[2] seem to have shown that intracardiac diastolic pressure is constant during large changes brought about in other pressure areas by vasomotor constriction To effect a more or less complete relaxation of the vasoconstriction in any case in which it accompanies the seizure, however, serves to ameliorate the attack.

It must be recollected also that the leading exciting causes of angina pectoris—muscular exertion, mental emotion, gastrectasis, exposure to cold—all quickly raise the arterial tension The occurrence of associated vasomotor spasm is true of most forms belonging to either true or false angina The theory of intermittent claudication originally advanced by Allen Burns still finds a place in the realm of speculation, since it is impossible to conceive of coronary ischemia in connection with an unimpaired rhythm of the heart as is witnessed in many cases of angina

The seat of the pain is undoubtedly in the heart in angina pectoris and the paroxysm itself is the result of an extra stress or strain thrown on an organ that fails to respond to a normal environment, or to the usual external stimuli MacKenzie[4] holds that since angina pectoris arises in connection with a great variety of gross morbid lesions of the heart, there must be an exciting cause common to all cases, and this he believes to be impairment of the muscular contractility of the heart

As *a priori* evidence, MacKenzie cites the fact that this is the function "directly concerned in furnishing the motive force to the circulation of the blood and that it is the function that will necessarily become exhausted when an excessive resistance is opposed to the contraction of the heart muscle The opposed arterial pressure may be abnormally high, but as a rule greatly lowered, since angina vera is a late complication, or to speak more accurately, a terminal condition In either cases the extra stress or strain imposed by the action of one or other of the existing causes will exceed the contractile power of the heart and as a consequence suddenly induce an attack"

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* Read in the Section on Practice of Medicine of the American Medical Association, at the Fifty seventh Annual Session June, 1906

[1] The Journal A M A., Sept. 17 1904 page 775

[2] Lancet, July 18 1903

[3] Lancet, Nov 1 1902.

[4] An Inquiry into the Cause of Angina Pectoris" J MacKenzie, British Medical Journal Oct. 7 1905, p 845

This theory readily explains the cases of angina that occasionally follow an attack of pneumonia or other severe infection in advanced life in subjects of coronary disease with myocardial degeneration. I have recently seen a case in point (as a sequel of pneumonia) with Dr Jungman, of Philadelphia The theory of MacKenzie also elucidates a number of cases, which have been shown by observations carefully analyzed, to be independent of any coronary involvement as well as those of *angina sine dolore*

A leading view ascribes the attack to a cramp-like contraction of the myocardium and although such a state of things might be excited by coronary infarctions, it would, as previously stated, preclude the possibility of regular and orderly rhythm of the systole

A Morrison[3] holds that the paroxysms are due to "the distinctive throb of the blood cast by the dilated yet powerful ventricle into the aorta and coronary system;" also that the condition may be due to the effects of neuritis, to muscular spasm and to hemic conditions, the blood exercising pressure on local diseased areas Colbeck[5] contends that the cause of the paroxysm is a localized distension and stretching of the diseased areas in the ventricular wall, and Traube has advanced much the same opinion

It is a common observation that stimulation of the heart in which predisposing conditions exist, more especially by the use of digitalis, which induces more energetic contraction and raises the peripheral tension, may provoke a recurrence or at all events, aggravate existing stenocardial pains On the contrary, it is an equally familiar fact that the exhibition of arterial relaxants, e. g, nitroglycerin, is often followed by decided relief Such considerations as the foregoing, however, do not explain why angina is admittedly uncommon among the working classes or hospital patients who present cardiac lesions identical with those met among the better-to-do in whom the syndrome is of far greater frequency of occurrence

TRUE ANGINA.

Angina vera occurs principally in men engaged in sedentary and, for the most part literary pursuits, as well as those who follow an inordinately strenuous business career, in short, persons whose nervous mechanism is minus as the result of overwork, principally mental, with insufficient rest An impaired nervous vitality, therefore, is to be looked on as a marked predisposing element Is not the fact that angina is a neurosis of the heart too constantly overlooked?

This condition of the nervous system may be looked on as being neither less nor more than neurasthenia, but may there not be added some peculiar, nutritional or degenerative change in the nervous system, brought about by high nerve pressure, which finds its expression in a peculiar neurosis that serves as the predisposing element in angina pectoris?

No theory of the genesis of this syndrome is complete that does not account for *angina sine dolore,* in which the main feature is an indescribable almost painless, sensation or precordial oppression The true essence of the condition may yet be discovered in connection with this minor group of cases The history of an illustrative case may be briefly narrated, more particularly because of its intrinsic interest and anomalous character

History—M D, female, married aged 50 years, height, 5 ft, 2 in, weight 153 lbs Two paternal uncles died suddenly of "heart failure," after the seventieth year of life, and one brother died at 54 of organic heart disease The patient had had numerous recurrent attacks of follicular tonsillitis up to four years ago, and rheumatic pains at intervals, more particularly in the shoulders

The social history embraces nothing worthy of mention save only that the menopause had been passed five years previously The principal complaint at my first visit was constipation, which dated from the time of change of life. There was, however, slight dyspnea on exertion

Physical examination revealed a moderate degree of emphysema and mitral incompetency in the stage of compensation

Treatment—The treatment during the next four years consisted of a rearrangement of the diet and an occasional laxative pill and a small daily amount of Celestine vichy

Course—Oct. 5, 1905, the patient complained of slight pains in both shoulders and the upper half of the precordial region with radiation to the left arm, which was also the seat of numbness While the pains were never severe, they behaved like those of true angina, being excited by walking, facing the cold winds and mental excitement Associated with the precordial pains was a sensation of marked cardiac oppression, and there was a moderate degree of anguish detectable The seizures became recurrent first at intervals of a few days, and towards the close of life of about six hours With the advance of the case the thoracic oppression was attended with a feeling of smothering or suffocation, and dyspnea also entered into the syndrome The principal seat of pain, which was at no time severe, shifted later to the epigastrium for a time, to be followed in the course of a couple of weeks by *angina sine dolore,* the starting point of the seizures being in the epigastrium A well marked restlessness and an almost uncontrollable desire on the part of the patient to leave her bed was present during the last few days of life A striking feature was the manner in which the oppression recurred during a period of two or three weeks prior to death, it invariably originated in the epigastrium and right hypochondriac region, then traveled wave-like upward over the thorax, becoming most marked in the lower sternal region, and attended with dyspnea and suffocative sensations as already remarked Neither in the epigastrium nor thorax (the heart apart) could be found evidences of disease to account for these symptoms Objectively, the usual signs of angina pectoris were noted, especially the anxious facies and the ashy gray appearance of the countenance

Finally death came quickly on Jan 15, 1906, after a pleasant chat with the nurse, without manifesting any distressing symptoms that were observed There was neither arrhythmia nor evidence of arteriosclerosis present.

This particular form is found engrafted on a variety of structural cardiac diseases and may, therefore, be looked on as a terminal condition I had never previously observed a case belonging to this category arise in the course of simple mitral incompetency but one instance in the course of mitral stenosis G Steele[6] has reported two cases of angina pectoris occurring in patients with mitral stenosis and he believes that symptoms so similar to angina occur in this disease that there is no reason for giving them another name

Angina sine dolore is not uncommon as pointed out by Oliver,[7] in dilatation of the heart, aneurism of the first portion of the arch and adherent pericardium What exactly is the essential cause of the absence of intense pains in these cases is still an unsettled question It has been held to be on account of ensuing dilatation as was true of cases reported by Musser,[8] but apart from a slight increase in weakness of the systole toward the close of life, no change in the physical signs were noted in my case reported above From the fact, however, that the use of moderate sized doses of digitalis (given as a test) aggravated the precordial pains in the earlier stages of my case, the view that increased endocardial pressure stands casually related to this symptom receives a considerable degree of coloring

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[5] Lancet March 21 1903

[6] Lancet Nov 23 1903

[7] "Angina Pectoris and Allied Conditions" Lancet Sept. 16 1905

[8] American Journal of the Medical Science vol cxiv 1897 pp 294 302.

This class of cases reminds us forcibly that a distinction is to be made between intense paroxysmal precordial pains and angina pectoris, that the essence of the essential difference between so-called false and true angina is to be found in some as yet unknown agency or possibly in the different degrees of impairment of the muscular contractility in the two conditions, this being slight in the former while it is carried to a dangerous extent in the latter, principally because of the associated structural lesions

The claim has been made by some writers that cases in which the pain originates below the diaphragm are less threatening to life, but in this opinion I do not concur Finally, true angina pectoris may be dependent on a diet containing an excess of proteids The toxins in the circulating blood in chronic intestinal toxemia or autointoxication may primarily cause the toxic form of false angina, this occurs ofttimes in the young at a period of life when the balance of power is with the organism and gross structural changes do not arise, but at a later period the balance of forces is with the circulating toxins and slowly progressive degenerative changes of the cardiovascular system are the result

Obese persons who exhibit high arterial tension with arteriosclerosis and left ventricle hypertrophy may, as I have observed, develop angina pectoris as the result of a rearrangement of the dietary, so that proteids in liberal amounts are allowed and the carbohydrates greatly restricted, with a view of overcoming the corpulency In this class of cases, there is a strong probability of effecting a cure by appropriate measures, which consist principally in rest, arterial relaxants, stimulation of the emunctories, and a return to a mixed dietary

PSEUDOANGINA.

In 1812, Latham described false angina The term "false" or "pseudoangina" is applied to a large group of cases in which the predominating feature is precordial pain, sometimes with radiation This term has been objected to by many eminent authorities, but inasmuch as the condition is allied symptomatically to true angina, rendering a differential diagnosis well-nigh impossible in many instances, I favor the use of the term pseudoangina until additional light shall have been thrown on the whole subject

At the outset, I insist that many of the slightly painful conditions affecting the precordial region in rheumatic, neurotic and hysterical subjects can not be properly regarded as falling under the head of pseudoangina

Doubtless, the majority of cases originate in vasomotor instability and irritability, and as would be expected, they are met with in the female, more especially the hysteric type, and about the period of the menopause Heartstrain occasioned by suddenly-induced vasoconstriction will result in pseudoangina (Nothnagel) characterized by a special set of symptoms—palpitation, a feeling of faintness, precordial pain, perspiration with coldness of the extremities and lividity Again the instances of angina directly traceable to autointoxication from errors of diet should be placed in the same category provided that no sub-basis in the nature of an organic lesion of the cardiovascular system is discernible As previously stated, this variety of angina pectoris may be induced by an excess of proteids in the dietary The recognition of the special cause and its removal if carried out sufficiently early in the course of the affection will, as a rule, lead to an absolute cure

It will be seen that true angina and pseudoangina have causative factors and symptoms (as pains and vasomotor disturbance) in common Spurious angina, however, differs from the true form in three leading particulars—first, gross organic lesions are absent, secondly, it differs symptomatically, and thirdly, it usually yields to appropriate treatment

The cases of pseudoangina are divisible into three groups, namely, the neurotic, the toxic (two groups suggested by Osler) and reflex pseudoangina The last-named clinical or etiologic type is rare in the experience of some writers and is usually classified as a subvariety of the neurotic class of cases In my opinion, these instances are of sufficient importance to demand separate grouping I do not include here the gastrointestinal phenomena that are found associated with true angina, but those that induce paroxysmal and intense breastpang in subjects who present no gross cardiovascular lesions

The fact that certain contributing factors in true angina are present in this variety is of great practical importance and explains why, apparently, typical cases of the spurious form, after the development of some gross cardiac lesion, may merge into true angina

Cases in which apparent transition from false to true angina occurred, have been reported by Duffield,[9] Allbutt,[10] Morel-Lavallee[11] and others I have seen two examples, the first occurred in a neurasthenic female who, while under observation for pseudoangina, developed arteriosclerosis, including coronary disease The intensity of the pains remained uninfluenced, but mental anguish and dyspnea of a pronounced character became superadded features A fatal attack occurred in the course of five years after the first true attack

I may be permitted to refer to a second instance which recently fell under my notice

> A woman, aged about 40 years, who was distinctly hysterical, developed well characterized attacks of pseudoangina at long intervals A couple of years later indefinite signs of arterio sclerosis about the base of the heart developed, after which the symptom complex simulated more and more closely true angina pectoris, and finally became typical of the latter condition When I last saw the patient a slight mitral incompetency was present, this had obviously diminished the severity of the anginal seizures. I have been unable to learn the condition of the patient, who resides at the south, during the last four months

From personal studies and experience I feel privileged to speak confidently regarding certain cases, which so far as can be determined by known methods of examination at least are non-coronary, but sometimes prove to be fraught with lurking dangers In many cases of true angina pain alone is experienced (Osler) and this is more especially true of the milder forms I recall a fatal case of *angina vera,* which I saw with Dr Shivers, of Haddonfield, New Jersey, in which mental anguish and cardiac oppression were absent and during the paroxysms the patient exhibited great restlessness and commotion, such as commonly occurs in the false variety

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[9] The Pathology of Angina Pectoris Proceedings of Mich State Med. Society 1901

[10] Philadelphia Med. Jour June 16-30 1900

[11] Revue de Médicine Paris Nov 10 1890

DIFFERENTIAL DIAGNOSIS

When angina pectoris is well characterized we can differentiate it in a decisive way from the false variety by the *angor animi* and the strong sense of imminent dissolution Many additional symptoms may be associated during the paroxysms, but are not necessarily present and only serve to corroborate the diagnosis of true agina Among these, I would mention more particularly, respiratory disturbances, including asthma, dyspeptic symptoms and vasomotor disturbances, such as pallor of the face (rarely lividity), sweats and coldness of the surface

On the other hand, pseudoangina of pure form is often associated with the menstrual function and its effect on the vasomotor nervous system The rôle played by hysteria is also conspicuous as shown by the presence in some cases of globus during the attack Unlike in true angina we note marked throbbing of the cervical vessels and epigastrium as well as flushing of the countenance during the seizures There may be a clear history of toxic poisoning (tobacco) or reflex visceral irritation to support the diagnosis of pseudoangina The paroxysms are not provoked by muscular exertion, mental emotion or worry and feeling cold winds as in real angina, but arise spontaneously as a rule

It may be argued with considerable force that since real angina pectoris may occur in hysterical and neurasthenic subjects with or without gross cardiac lesions, there must be a contingent of cases in which a diagnosis within the limits of a reasonable probability only is possible

It is the clinically mild and doubtful cases that come more particularly within the scope of the present discussion, and since it has yet to be shown that these are incapable of developing into typical angina vera, a most exhaustive survey of examples of the sort must be carried out before pronouncing in favor of false angina It is permissible only as a rule to determine the inherent probabilities of a given case and opinions must be offered with due caution and reserve It would also be far more helpful to patients suffering from dubious cases if they were treated for true angina until the question of diagnosis were definitely settled

RELATION OF PSEUDOANGINA TO ANGINA VERA

The relation of so-called pseudoangina to true angina pectoris is not definitely known at date of writing The nascent stage of true angina, which may not be well characterized, is sometimes mistaken for the false form

It is admitted that cases of angina vera ending fatally may fail to show any cardiovascular lesions In such instances, the severity of the precordial pains during the paroxysms may cause the arterial pressure to fall so low as to be followed by fatal syncope On the other hand, death from pseudoangina is unknown

It can be accepted as a fact that the chronic lesions met with in angina pectoris may be excited or initiated by the toxic and other causes of pseudoangina Admittedly, transition from functional to organic disease of the stomach occurs, e g, many cases of chronic gastric catarrh result from pure gastric neuroses Another illustration is furnished by the toxic effects of tobacco which ordinarily produce pseudoangina, although rarely the paroxysms finally simulate those of the organic form so closely as to be indistinguishable Whilst the evidence chiefly clinical, to establish this remote relationship of the two forms of angina, would appear to be clear and convincing, it must be granted that the results of improved methods of investigation more particularly as related to the arterial pressure, may in future enable us to interpret correctly all of the phenomena that enter into their clinical history and thus permit of an essential distinction between them or even to show that each is produced by a special cause.

Although there are apparently etiologic affinities between the two forms of angina—real and unreal—my view accords with that of Huchard Osler and others, who claim that we should adopt this provisional classification and separate the functional from the organic form, whenever practicable

Finally, it is commonly held, as before stated, that the false variety is solely of vasomotor origin, a sort of unsteadiness, which has been designated by S S Cohen[12] as vasomotor ataxia True angina is allied to the functional form so far as vasomotor disturbances are concerned, it, however, embraces a variety of pathologic lesions whose relations to the symptomatic indications of the syndrome are truly obscure and complicated

DISCUSSION

ON PAPERS BY DRS ERLANGER, THAYER, POTTER, DAVIS AND ANDERS *

Dr. Edmond Gros, Paris, France, referred to the three instruments which are variously used in different countries for the measurement of blood pressure, viz the Potain or modified von Basch, the Gærtner and the Riva Rocci In France the Potain Sphygmomanometer is used almost exclusively He was interested to know how this compared with the Gærtner and Riva Rocci measurements and was struck by the difference of pressure obtained with these instruments The reason for these variations no doubt lies in the fact that each instrument measures the blood pressure in a different manner and in a different region of the body Furthermore, there is in each case a factor of error which does not seem to be avoidable The Potain, when properly applied, seems to give a relatively accurate measurement of blood pressure, but the pressure will be found too high if the recurrent circulation be not carefully obliterated The Gærtner ring is applied in a region so rich in capillary blood vessels that various vasomotor influences such as pain, emotion, fever, etc, cause rapid changes in blood pressure In fact Tessier has found that the very fact of tightening or loosening the Gærtner ring on the finger in eruptive fevers, raises the pressure in the radial artery from 10 to 30 m m, evidently acting in the manner of a slight trauma Gros exhibited an instrument which, he explained, is an ingenious adaptation of the Gærtner ring to the sphygmomanometer devised by Bouloimié of Vittel It greatly facilitates comparison of the presures obtained by these two methods He has found that the blood pressure measured in the radial artery with the Potain ranges from 120 to 160 m m, the Gærtner indicates a pressure of from 10 to 30 m m lower, but the breech gradually widens when the radial pressure runs above 200 or 220 so that a pressure of 260 with the Potain corresponds to about 220 with the Gærtner

The Riva Rocci, which represents the blood pressure in the whole of the arm, is relatively accurate, but here again the error factor comes into play, the tightening of the cuff first obstructing the venous circulation before obliterating the brachial artery Therefore, the pressures obtained are higher than either with the Potain or the Gærtner

Here, then are three instruments in use in different countries giving markedly different measurements in each case, the figure not ever varying in any direct ratio Until a standard of blood pressure is determined the figures found by different authors lose much of their value and can hardly bear comparison

Dr Woods Hutchinson, Redlands Cal thought that what stood out in the symposium as of prime importance is, first of all, that too exclusive attention had been paid to the condition of the valves in heart disease. We have been too much inclined to regard them from purely a mechanical point of view, and to say that damage to the valvular mechanism was the most important thing. To day most men go to the opposite extreme. Valvular lesions are relatively harmless so long as the endocardium is intact. The fact should be recognized that the heart is a pulsating mechanism with a sphincter valve action, not only do the valve flaps play a purely mechanical bucket pump action in checking the regurgitation of the blood, but contraction of the ring of muscles surrounding the valvular orifice occurs and should be considered as well. There are a large number of murmurs, so called valvular murmurs, which are due to disturbances of the musculature of the heart and not to the valve at all. He referred to one of his first cases, which went to postmortem, in which all the symptoms had pointed to a mitral insufficiency, and no lesions whatever of the valves were found, but the mitral orifice was extremely large, making the valve flaps inadequate to close it. The contraction of this sphincter auriculo ventricular ring he considered a very important factor in carrying on the circulation. A heart with a perfect musculature can compensate very well even in cases of severe valvular lesions.

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[12] Transactions of the Association of American Physicians 1892.

* The papers by Drs Erlanger Thayer and Potter appeared in The Journal October 27

Secondly, too much attention should not be paid to the heart itself in cardiac troubles, serious damage of the heart may be compensated perfectly so long as the walls of the blood vessels and the general nutrition of the patient are in perfect trim. No better illustration can be given than to note how often patients with valvular mischief have outlived the men who condemned them to death. Valvular damage must be regarded much as the gastroenterologists formerly did hyperchlorhydria, but so long as it does not cause the patient any discomfort it is of little consequence. He thinks somewhat the same position might be assumed as taken by an old German colleague on the alcohol question, he said that "alcohol injures no one except those with whom it happens to disagree." Even heart lesions may do little harm unless there is failure in compensation and lack of general recuperative power. With regard to the cause of heart mischief, by searching inquiry he was able to trace 70 per cent. of his cases to some acute infection, not so often to rheumatism as to the minor infections and exanthemata, tonsillitis, influenza, measles, typhoid, even summer diarrheas. If cardiac conditions were treated as sequelæ of infections and toxic conditions, better results would be obtained than by direct treatment of the heart itself. Indeed, the latter is often positively injurious instead of beneficial in the long run.

Dr. Frank Jones, Memphis, Tenn., discussing the paper read by Dr. Davis on "Pericarditis," said he had been struck in studying that disease by the analogy which could be drawn between diseases of the pericardium and diseases of the pleura, the same conditions may produce diseases of the pericardium that produce diseases of the pleura, such as rheumatism, pneumonia, tuberculosis, etc. He has been struck with the coincident pleural and pericardial affections, whether hemorrhagic, sero fibrinous or purulent. Dr. Jones said that he has frequently observed cases in which the symptoms were held in abeyance, but the physical signs were marked. He has seen patients in the clinic with no dyspnea, no cough, no acceleration of the pulse and no temperature, but in whom physical examination revealed a pericardial sac two thirds filled with liquid. In one case 16 ounces of pus were removed and this patient walked one half mile. Dr. Jones believes that in the majority of instances of effusions of fluid in the pericardium the more insidious they are the more often will they be found to be tuberculous in nature. There are more cases of tuberculosis of the pericardium than is generally supposed.

In discussing Dr. Ander's paper on "True and False Angina Pectoris," he said that so far as he is concerned he has little patience with the nomenclature of false angina, there must be some pathologic condition back of it somewhere. In the production of pathologic conditions we hear of cardiac insufficiency of hepatic insufficiency, of renal insufficiency, etc., but we do not hear enough of gastrointestinal insufficiency, frequently the *alma mater* of all insufficiencies. He said he was struck not long since in reading a paper on so called pseudoangina pectoris, by the statement that if these cases were examined critically and the patients went on and lived a more vigorous life the false would be run out and the true run in.

Dr. W. S. Thayer, Baltimore, agreed with Dr. Jones' views as to the frequency of tuberculous pericarditis, he regards insidious sero fibrinous pericarditis as being, in the majority of cases, tuberculous in nature, this is supported by the results of necropsies. He is inclined to regard the estimate that 12 per cent. of pericarditides are tuberculous as too low. With regard to angina, he agreed that in cases with anginoid symptoms it is sometimes difficult to determine whether or not grave organic cardiac lesions are present. The most important diagnostic sign is the effect of exercise, if the patient is suffering from true angina, the result of severe organic changes, exercise almost invariably brings it on. With regard to the seat of the pain, he has seen several instances in which the pain had been referred primarily to the back. In one case, now under observation, in which the pain follows any severe physical effort or mental excitement, it occurred first between the shoulders, later, accompanied by pain in the precordial region and numbness down the left arm. In discussing Dr. Potter's paper, Dr. Thayer referred to the interesting observations of Pässler and Heinecke, who have succeeded for the first time in producing cardiac hypertrophy in animals by removing first one kidney and later, in successive operations, portions of the remaining organ. After a certain amount of renal substance had been removed, polyuria followed without any increase in the blood pressure. On removing more kidney substance there followed a rise in the blood pressure which was permanent and associated with characteristic cardiac hypertrophy. They noted also that, in these animals, arterial spasm with further rise of blood pressure quickly followed stimuli which in normal animals would produce little effect. These observations would suggest that the heart hypertrophy is due to increased work dependent on the impediment to the circulation resulting from the tendency to arterial spasm due, in its turn, probably, to retained toxic substances.

Dr. James Tyson, Philadelphia, referred to two interesting cases of pleurisy with effusion and pericarditis with effusion. In the first, in a child of 8 years, the removal of a considerable amount of fluid was successfully accomplished by tapping in the seventh interspace midaxillary line and it was supposed to have come from the pleural cavity, but at autopsy the pleural cavity was found empty and it was found that the fluid came from the pericardial sac. The second case was one of supposed pericardial effusion. The fluid was successfully removed with a trocar introduced in the sixth interspace in the millary line, left side, and the vibratory motion conveyed to the distal end of the trocar made it reasonable to believe the instrument was in the pericardial sac. The fluid was also discharged in spurts corresponding to the cardiac rhythm. Later there appeared signs of pleural effusion. At autopsy a typical tuberculous pericarditis was noted and in addition a tuberculous pleurisy with effusion. The autopsy did not afford evidence as to whether the fluid primarily removed came from the pericardial sac, but there was no reason apparent why it did not. These cases prove the possibility of the two conditions of pericardial and pleuritic effusion being confounded.

Dr. Tyson added that it has long been recognized that large hypertrophies of the various cavities of the heart, especially of the left ventricle, occur in chronic Bright's disease. He is inclined to think that the primary cause of this condition is a toxic condition of the blood, exciting resistance to its movement through the vessels, which in turn excites the primary cardiac hypertrophy. Arteriosclerosis caused by the same agency soon coöperates with this. This arteriosclerosis undoubtedly contributes to the hypertrophy of the left ventricle. Dr. Thayer's remarks as to the effect of experimental removal of portions of the kidney revives the theory of the resistance to the amount of blood passing through the blood vessels of the kidney caused by destruction of the organ and its replacement by fibrous tissue. In the matter of angina and pseudoangina Dr. Tyson said that he is disinclined to acknowledge pseudoangina as an entity, these cases ultimately prove to be either true angina or hysteria. Finally, he directed attention to the analogy between the pain in cramp of the muscles of the leg with the pain in angina pectoris Probably the muscular spasm in both is the result of anemia of the muscles and the cramp due to compression of nerves by the cramped muscles

Dr. T A Claytor, Washington, considered only the blood pressure in heart conditions In the first place he said that he has observed in cases of cardiac insufficiency, whether they be from valvular insufficiency or not, that when patients are first seen suffering from dyspnea, edema, and indications of loss of compensation, the blood pressure would be found to be high, even as high as 180 to 190 But after they had been kept in bed and given digitalis, the blood pressure fell. This is very remarkable, but he said he has seen it so often that he believes it to be almost the universal rule When the blood pressure is high in loss of compensation, after the use of digitalis it falls and becomes almost normal.

He then spoke of a class of cases showing high blood pressure associated with cardiac hypertrophy with probably renal insufficiency These patients, usually between 40 and 70 years old, give symptoms of slight shortness of breath on exercise and precordial distress Physical examination reveals a hypertrophied heart, an accentuated second sound, and probably a slight mitral insufficiency murmur Whether this is due to a real valvular lesion or due to the relative insufficiency it is hard to say The blood pressure was found to be high The urine showed the presence of albumin and casts at times Such cases were probably Bright's disease The blood pressure varied from 180 to 225 or more The first idea that comes to all would be that the pressure is too high and should be reduced and the question arises what is the best means to reduce this high blood pressure The ordinary nitrites are practically useless, nitroglycerin is of little value Iodid of potassium has more effect. It relieves the headache which is often associated with high pressure and this is the most satisfactory means, aided by rest in bed purgatives and a milk diet Since high blood pressure is, in this class of cases probably a conservative effort on the part of Nature to overcome a pathologic defect, Claytor doubts the advisability of making such strenuous efforts to reduce it in every instance

Dr C M Cooper, San Francisco, said that a young man recently entered the German Hospital in San Francisco in the service of Dr Jellinik with symptoms of acute gonorrheal septicemia He developed an acute Adams Stokes syndrome. The disease ran an acute course and at postmortem an acute lesion was found in the vicinity of His' bundle, thus strongly emphasizing the relationship between a lesion of this bundle and the clinical symtom complex known as Stokes Adams disease. Recent work has shown the importance of taking simultaneous tracings of the venous and arterial pulse and of the heart beat in the study of all forms of heart disease. Hitherto, we have had to depend on the cumbersome cylinder drum or the finicky MacKenzie clinical polygraph Jacquet has lately devised an instrument for this purpose readily portable, well constructed, and clinically efficient The practitioner will find it of much service. It must not be forgotten that the *x* ray is of distinct service in the study of heart affections Cooper has lately demonstrated at the San Francisco County Society plates showing distinct evidence of adherent pericardium and of dilatation of the descending aorta behind the heart. The correlation of these plates with the symptoms and physical signs is of distinct aid in the diagnosis He emphasized the infection theories advanced by Dr Woods Hutchinson—probably often unrecognized or little heeded sore throats nasal catarrhs alveolar pyorrheas and urethral inflammations which by their summation of effect impair the cardiovascular system

Dr G W Norris Philadelphia said that during the past winter he has seen three cases of Stokes Adams syndrome, one of which he had an opportunity of carefully studying He has made tracings coincidently of the jugular and the radial pulses, as well as the cardiac apex beat These tracings show very distinctly an extra number of auricular contractions The auricular contractions were accelerated by deep inspiration the ventricular rhythm was unaffected by this or by change of posture He believes that by using the Jacquet polygraph we would be enabled to learn a good deal about cardiac diseases which has not previously been known, and that the tracings made by this instrument would prove not only of scientific interest but also of practical utility, especially in cases of arrhythmia, perhaps, also, in instances of pericardial adhesion and possibly in differentiating between true and false angina pectoris As a clinical procedure this method of studying heart affections is rather new, and probably some time will elapse before all the data thus obtained will be properly interpreted, but he thinks that a new field has been opened which holds forth considerable promise.

Dr. Bertram W Sippy, Chicago mentioned a sign brought out by Dr Davis, viz., systolic retraction and adherent pericardium This traction is caused by the outer pericardium being attached posteriorly, the remaining portion of the pericardium is also attached to the thorax therefore, when the heart contracts, it pulls in on the surrounding structures, pulling in the intercostal spaces and so producing systolic retraction This, he said, may, lead to an error in the diagnosis of adherent pericardium When systolic retraction occurs at the apex that, in connection with other physical signs, is sufficient for diagnosis But systolic retraction occurring at the base of the heart occurs not infrequently without adherent pericardium Systolic retraction he considers as an evidence of adherent pericardium only when it occurs at the apex and not at the base, and in connection with other physical signs The great increase of the work of the heart caused by this condition practically always is associated with incompetency it must pull on the surrounding tissues, thus handicapping it. Dyspnea, cyanosis, etc. will be present

Dr De Lancey Rochester Buffalo said he wished to speak of symptoms which he has observed in connection with pericarditis and to which Dr Davis had not referred First, there is pain in the interscapular region posteriorly between the shoulders, a symptom that he has found in many instances

In reference to pseudoangina and true angina pectoris he agreed with Dr Tyson that there is difficulty in distinguishing between them Dr Rochester then reported the case of a woman, between 45 and 50 years old who was visiting in Buffalo and who was seized with pain in the epigastrium He was called and found that she had been indulging in a promiscuous supper, that there was a considerable amount of pain and that this pain was the only symptom, there was no fear of death, no dyspnea, or other symptom The pain was relieved after the stomach had been emptied. The next day she did not feel very comfortable on the next day she again was seized with pain, not only in the epigastric region but in the chest and left arm, and this pain had to be relieved with morphin Dr Stockton was called in consultation and they could not find any evidences of disease of the arteries There was no nephritis and no evidence of arterial disease The heart was of normal size and the sounds were good The next night she was again seized with pain and died before he got there The autopsy revealed a ruptured heart with pronounced arteriosclerosis, a thrombosis of the left coronary and a marked thinning of the muscle at the apex of the heart where the rupture had occurred. The rest of the heart muscle was in good condition There was an arteriosclerosis of the coronary arteries

Dr. Stephen S Black Pasadena Cal, said that Dr Sippy's remarks regarding the diagnosis of adherent pericardium by systolic retraction are very important but that this is not the only thing which produces it The apex beat is caused by a lengthening or straightening out of the aortic arch, also by rotation of the heart and at the same time by contraction of the ventricles This all throws the heart against the chest wall Any interference with the lengthening of the aortic arch or contraction of ventricles or rotation of the heart will cause a depression or retraction of the apex beat He said he has seen very pronounced cases in which the apex was depressed during systole and there were no pericardial adhesions whatever

Dr Nathaniel B Potter New York City quoted statistics from the City Hospital Autopsy Records 1906 to show that nutrition has to do with cause of cardiac hypertrophy

Dr. J M Anders Philadelphia remarked that Drs John Tyson and others objected to the term pseudoangina and he did not intend to defend this term In the portion of his paper which for lack of time could not be read he had stated that in view of the symptomatic relationship existing between true angina and the false variety, rendering a differential diagnosis well nigh impossible in many instances, he would encourage the use of the term "pseudoangina" until additional light should be thrown on the whole subject. These cases of so-called pseudoangina might be regarded as hysterical in nature, as suggested by Dr Tyson, but even severe precordial pain due to that cause must be separated from true angina for the sake of appropriate treatment. The case related by Dr Rochester, which occurred in a neurasthenic person, later developed true angina and was similar to two cases reported in his own paper His view, as previously stated, was that they hold fast to the provisional classification into pseudoangina and angina vera and separate the functional from the organic form whenever practicable

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OBSTRUCTION AT THE TERMINAL PORTION OF THE COMMON BILE DUCT

DUE TO CANCER OF THE AMPULLA. AN ANOMALY IN THE CYSTIC DUCT SIMILAR OBSTRUCTION DUE TO PANCREATIC CANCER

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Cases of cancer at the terminal portion of the bile duct within the duodenal wall are sufficiently rare and the signs are sufficiently characteristic to warrant the following report

Jaundice and pain are the most frequent signs of disease of the bile passages, jaundice belonging especially to common duct disease Musser found it present in 17 of 18 cases of cancer of the ducts and pain in 12 of the 18 In gall-bladder disease jaundice is present in but 20 per cent of the cases

In 16 cases of cancer of the ampulla on record, jaundice has occurred in all, while pain is mentioned as present in but three, and then of an aching or general abdominal character

This may be partly explained by the fact that when the ducts are the seat of cancer I found a history of gall-stones in but 18 per cent of 25 cases, while various authors give from 69 per cent to 95 per cent of gall-bladder cancers as showing gall stones

Occasionally the jaundice is due to a lesion, in itself of no consequence, but so placed as to obstruct some important function of the body as, for instance, cancer of the tip of the bile duct or parasites or some kinking at this point There have been described by a number of authors such primary cancers which originated in the mucous membrane of the ampulla of Vater, the clinical picture of which they claim to be distinctive

The following case is of interest as one of this class of painless jaundice

Case 1 —A male, 66 years of age, a farmer, came in October, 1901, complaining of severe jaundice which had developed rapidly, within four or five days, without pain This painless jaundice, loss of flesh and frequent bowel movements were the first evidences to him of any illness, but, on further questioning, the following details were obtained

Two years before, he first noticed a tendency to looseness of the bowels Four or five months later, the stools became pale-colored, "putty like," foul smelling, small in amount and unsatisfactory By the end of the first year they occurred once or possibly twice during the night, and three or four times during the day Nine months later he noticed a very slight soreness just below the eighth costal border, which has continued till the present time. Three weeks ago, he first noticed jaundice, severe itching and dryness of the skin He had lost 40 pounds in weight, his usual weight being 200 pounds He felt energetic active, appetite good, and complained of nothing but the jaundice.

His family and past personal history were negative. He had never had a venereal disease, nor had he used alcoholics He had never been troubled in any way with indigestion, nor had he ever had bilious colic, a previous jaundice, nor any serious pain or discomfort referable to the abdomen

Physical examination showed temperature normal, pulse 68 The thoracic and abdominal organs showed nothing abnormal except the liver, the upper border of which was in the sixth, eighth and tenth spaces, but the lower edge could be felt rounded, two fingers' breadth below the ribs The gall bladder was outlinable to percussion and palpable as a pear shaped, slightly tender body, pointing toward the umbilicus

The urine was 1,024 acid, dark coffee colored, and contained a trace of albumin, no sugar, a large amount of bile pigments, many large and small hyaline, cellular and pigmented casts, a few renal cells and leucocytes

A blood count at 10 a m showed 6,600 white cells, 5,600,000 reds, and a hemoglobin index of 74 per cent The normal digestion leucocytosis was present, the count being 10,000 after a meal

This was the last of November The patient was not seen again for six weeks, during which time he had a severe tonsillitis with abscess formation When seen in January, 1902, his urine was scanty and contained a large amount of albumin, bile pigment and casts, no sugar There was marked edema of the legs and abdominal wall, and a large amount of ascites

The jaundice persisted until death There was no pain except that, dull in character, due to the gall bladder distension Death occurred January 30, thirteen weeks after the first appearance of jaundice, two years and three months after first noticing the frequency and loss of color of the stools

A summary of his history is

Two years and 3 months ago frequent putty like, pale colored stools

Six months ago soreness at right costal border

Five months ago sudden painless jaundice, rapidly deepening in 4 to 5 days

Loss of 40 pounds in weight in one year

Death 2 years and 3 months after onset

The diagnosis had been cancer of the head of the pancreas. At the autopsy made by Dr Parker, formerly assistant in pathology at Western Reserve University, a cancer of the tip of the common bile duct was found within the duodenal wall The gall bladder was greatly dilated, measuring 12 × 6 cm , and had fallen down till its long diameter was parallel to that of the liver This explains its not being felt late in the disease. The common, pancreatic and cystic ducts were greatly dilated The hepatic ducts were dilated up into the liver and were surrounded by a fibrosis

An anomaly in the ducts was present in that the cystic duct passed alone, parallel to the hepatic duct, entering it just before the latter's entrance into the intestinal wall, also, the hepatic duct united with the duct of Wirsung in the head of the pancreas The common duct, therefore, extended only from the pancreatic head to the duodenal wall, 1 cm The bile papilla was very small Dr Parker says "On opening the papilla a mass of dense hard white tissue is found This tissue occludes all the entering ducts It is fairly well localized, forming a patch about the size of a quarter" The growth was an adenofibroma There was no metastases The pancreas was of increased firmness

The bit of duct between the junction of the common bile duct and the pancreatic duct and the bile papilla in the duodenum is called the ampulla of Vater It is contained almost entirely within the duodenal wall as it passes obliquely through it It is of slightly greater diameter (4 to 5 mm) than the bile duct above and the orifice below Its length, as measured by Opie, varies from 0 to 11 mm In 11 cases in 100 the pancreatic duct opened on the duodenal surface by a separate orifice This small duct common to the pancreatic juice and bile is the cavity in which gall-stones occasionally lodge and is the second most frequent seat of beginning cancer of the ducts[1] Hanot[2] speaks of such an orificial cancer occurring at the point of transit between two types of epithelium It is also interesting to note that in one other case of such a cancer[3] described, as well as the above, there was an abnormality in the duct formation

The occurrence in an adult of a painless, rapidly deepening jaundice, without previous attacks of biliary colic and without fever, is the simplest form of duct obstruction with which we have to deal It leaves no doubt as to the obstruction of one or more of the bile ducts either from disease within them or from pressure or constriction from neighboring organs Of the former we have catarrhal jaundice, cancer, stricture, parasites and gallstones to consider

A catarrhal jaundice occurs usually in children and young adults, is generally preceded or accompanied by gastric catarrh and fever and, above all, runs a short course of 3 to 4 weeks However, Quincke remarks that "in old people an attack of simple catarrhal icterus may end fatally from long-continued stasis of bile" In such a case the diagnosis from a primary duct cancer without exploratory operation might be impossible

Gallstones have been reported by several authors[4] as slipping into the neck of the gall bladder or even into the common duct and there causing a painless obstruction by pressure This, occurring without previous attacks of pain referable to gallstones or gall-bladder disease, must be extremely rare

We can conceive, and have seen instances, of a stone floating about the entrance to the cystic duct, as Fenger[5] describes, acting as a ball-valve, causing more and more dilatation of the duct orifice and finally becoming lodged so as to press against the hepatic duct as it descends to join the cystic, or by prolonged irritation causing an inflammation of the surrounding tissues including the hepatic duct and the lymph glands adjoining it and partially or completely obstructing it But these must necessarily occur with some pain and characteristic attacks of chilly feelings, fever and other signs of contained fluid

Fenger[6] and others speak of a parasite, an echinococcus or intestinal worm becoming lodged in the duct These are rare and but need to be among the old files of our diagnosis scheme The presence of parasites in the stools or a nationality or mode of life possible to echinococcus infection would be suggestive

Of cancer of the bile duct Hanot groups the facts most clearly when he says "Chronic progressive jaundice, apyretic, with decoloration of the fecal matter, no sharp pain, moderately enlarged liver, emaciation till death five to nine months later, is characteristic of cancer of the tip of the common duct"

The attendant train of impaired digestion and absorption, the cholemia resulting in the nephritis, as well as the specific toxic effects and the serous membrane inflammations, to which these patients are liable, all contribute to a loss of flesh and a lowered vitality which in itself may bring the end or pave the way for intercurrent acute disease

Hence an early diagnosis is essential and where the first sign of a disease is so definite as in this condition we may hope for much by early surgical intervention I do not mean to say the first signs are diagnostic of anything but common duct obstruction, but, after a reasonable time of from 2 to 4 weeks for a possible catarrhal jaundice to subside, exploratory operation is indicated This has been done, as will be later cited

Of painless obstructions from without the duct we may have tumors of the pylorus, duodenum, pancreas, kidney, suprarenals, of the liver, of enlarged glands along the ducts and of echinococcus disease of any of these organs

Authors mention an icterus gravidarum in which the uterine tumor presses on the colon, causing accumulation of fecal matter and by its pressure an obstruction of the bile duct Other painless conditions of jaundice such as that described as following strong emotions after severe reabsorbed hemorrhage, during starvation, of syphilis, of the newborn, etc, all contain elements clearly distinguishing them from the present

Of tumors of surrounding organs, if they had not caused sufficient pain to attract attention before causing duct obstruction, they would give signs such as a palpable tumor, gastric dilatation, signs of ulceration, etc but in the pancreatic head there may occur a painless simple fibrosis, a scirrhus tumor, or a cyst capable of obstructing the choledochus as it passes by or through it

CASE 2—Mrs M., aged 75 years, had always been in good health, except for typhoid as a child, and scarlet fever at 40 years At 47 years of age, just before and following the birth of her last child, she had a severe painless jaundice which lasted 2 to 3 weeks, *and disappeared without further sign* This sounds very much like an icterus gravidarum above mentioned. At 60 years of age she had an attack of severe pain between the shoulders lasting one half hour and followed by no other signs I saw her at 75 years of age, complaining of severe sciatica, loss of flesh, gastric distress and eructations, with occasional vomiting one half to two hours after meals, no abdominal pain There was diarrhea and pale-colored stools The urine was negative The blood count showed 3,093,000 reds, 8,800 whites, and 85 per cent hemoglobin She had never had an attack of bilious colic Four weeks before death a marked painless jaundice developed The diagnosis of cancer of the pancreas was again hazarded

Autopsy revealed this condition with compression of the common duct. I am indebted to Dr Howard for the pathologic diagnosis In this case the obstruction at the lower end of the ducts was the tumor in the pancreatic head which had caused no pain There were no gallstones

The diagnosis of this condition from cancer of the duct which passes over or through the pancreatic head, or especially from a stone lodged at this point, is often of value by favoring timely operation

Mr Cammidge,[7] an assistant to Mr Mayo Robson has worked out and described a urine reaction which they hold to be of use in such a diagnosis Of 28 cases of chronic pancreatitis, the reaction was positive in all Of 6 cases of cancer of the pancreas, it was positive in but one Of 61 cases in which there was no pancreatitis it was negative in all Mr Mayo Robson[8] has been laying some stress on these results Further reports are necessary It is safe to say that pancreatitis, acute or chronic can be diagnosed by the clinical signs together with this reaction if it is reliable

Opie has clearly shown the relation which may exist between obstruction of the choledochus below the duct of Wirsung and pancreatitis This pancreatitis frequently persists owing to a chronic inflammatory thickening or an edema of the ducts long after removal of the obstructing cause From this we have a protracted period of impaired intestinal digestion which, in a patient of low vitality, may end in death A drainage of the bile passages not externally, but by anastomosis of the gall-bladder fundus into the duodenum, will improve this intestinal condition and at the same time drain the seat of the disease The foregoing would have especial weight where a stone was the cause of obstruction.

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[1] Rolleston Diseases of the Liver Gall Bladder and Bile Ducts."
[2] Hanot Arch gen. de Med November 1896
[3] Klotz Montreal Med Jour July 1904
[4] Nothnagel Liver Pancreas and Suprarenal Glands p 481
[5] Fenger Am Jour Med. Sci 1896
[6] Fenger Trans Am Surg Assn., 1896
[7] Cammidge Lancet March 19 1904 (Proof Nov 21 1903)
[8] Mayo Robson Diseases of the Pancreas Hunterian Lectures 1904

We may be able by the aid of a better knowledge of the chemistry of digestion and by further analyses of urine and feces to make accurate diagnoses in this group of cases, but until that point is reached early exploratory operation with its practical absence of mortality is justified

Three of these patients have been operated on, the growths excised and the duct implanted into the duodenum Mayo[9] accomplished this by the duodenal route "Recurrence after one and one-half years necessitated cholecyst-duodenostomy"

Halstead[10] excised the growth and implanted the choledochus in the duodenum The patient died six months later of recurrence Rixford[11] reports a case of adenocarcinoma at the ampulla, which, having been removed by a transduodenal operation, recurred in one year and caused death in fourteen months from operation It is unfortunate that all these were of the adenocarcinomatous variety, while several are reported in which the growth was more scirrhus and without metastases

The cause of death in the majority of cases has been the cholemia Early operation, after time has been allowed for a possible catarrhal jaundice to subside, is, therefore, justifiable with drainage of the gall bladder into the duodenum or colon With a better knowledge of the direction of the lymph flow from this region, early and free extirpation of growths, not only of the lower bile duct but of the duodenum, may bring good results, especially since these tumors do not form early metastases Mr Mayo Robson has suggested that cancer originating at this point is much more frequent than heretofore considered

Sixteen cases have been collected by Rolleston[1] (p 697), fourteen of which, he thinks, were "undoubted examples of cancer arising in the mucous membrane lining the diverticulum Vateri" Some of these I have mentioned and, in addition, cite a few references[12] not noted by him Those given contain ample bibliographies

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[9] Mayo Boston Med. and Surg Jour 1903 vol. cxlviii, p 545

[10] Halstead Johns Hopkins Hospital Bulletin No 103 January 1900

[11] Rixford The Journal A M A. vol xxxvi, p 1492.

[12] Moore Norman Bradshaw Lectures Lancet, 1889 vol ii, 415 Fereol Bull de la soc. med d observation 1859-63 p 123 Dickinson N Y Med. Jour 1870 vol xxx, p 149 Whittier Trans. Assn Am Phys 1889 vol iv p 292 Lennois and Courmont Rev de Med. 1894 vol xiv p 291 Edes Boston Med. and Surg Jour., Feb 28 1901 p 223

The Auto in Winter—With the addition to the present light car of a still lower gear and the attachment to the wheels of suitable gripping devices there is no reason why the future doctor's car can not wade through snowdrifts quite as deep as his horse could haul him through and in better time I believe, writes Dr P F Doolittle in *The Automobile* that within the next two years the doctors will demand such an all the year round vehicle and there are no obstacles in the way of the manufacturers meeting such demand

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THE TREATMENT OF TUBERCULOSIS OF THE URINARY TRACT IN WOMEN *

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TREATMENT OF THE BLADDER

Within comparatively recent years the disease was thought to be incurable, but the results that have been obtained in the treatment of the disease have disproved this Two factors have contributed to this end, better means of diagnosis and better means of treatment At present it is possible to treat a tuberculous bladder ulcer locally, by applications which are made with as much accuracy as though the ulcer were on the surface of the skin Hygiene has also played an important part in the therapeusis, as it has in tubercular affections of other parts of the body

The prognosis of tuberculosis of the bladder and of the upper urinary passages is to-day most encouraging, and it has kept pace with the brilliant results that have been obtained in the treatment of the pulmonary affection.

For purposes of convenience we may divide the subject of treatment into three heads Hygiene and climate, local treatment, and surgery

Hygiene and Climate—Early cases of the disease are sometimes best treated by a change of climate The principal objects to be attained are "First, avoidance of a new infection, second, putting the patient in the best possible physical state so as to develop his reparative power In order to accomplish this end the following rules are imperative First, permanent exposure to fresh air, second, free access to light, third, well regulated rest, fourth, carefully supervisal exercise, fifth, abundant nourishment, sixth, absolute obedience to the rules of hygiene, seventh, constant medical supervision"[1]

If a patient has the means and the time, this treatment will be the best to begin with Cures have been reported It is not within the reach of the poor, and it is not to be tried by those patients who are suffering intolerable torments The latter class demand immediate relief

A purely hygienic course of treatment is also recommended in those cases of very advanced urinary tuberculosis in which the whole urinary tract has been invaded, and both kidneys are diseased In such cases, out-of-door life in a well-regulated sanatorium will give the most comfort, and there have been cases reported of unexpected arrests of the disease

Local Treatment—Vesical tuberculosis has two stages The first is the one in which the miliary tubercles have not yet appeared in the bladder, and the only abnormality seen with the cystoscope are collections of bright red patches in which the tubercles are later to appear, the second stage is that of tubercle formation, with attendant caseation and ulcer formation

In the first stage topical treatment does not do any good, on the contrary, injections of various kinds and local applications are intolerably painful and can not do any good for the reason that they do not reach the seat of the trouble at all, the germs being imbedded in the tissues of the bladder and therefore beyond the reach of antiseptics It is far better, in this stage, not to attempt local treatment, and the most that can be done is to enjoin rest and administer general sedatives The urine should be made as bland as possible, and to this end large amounts of water and milk should be taken Urotropin may be tried, without much hope of success, although it sometimes acts beneficially, as there is usually very little pyuria in this stage it is difficult to see how a great deal could be expected of this much used drug For sleep, trional (sulphonethyl-methane, U S P) sometimes works exceedingly well, in one of the cases cited it acted admirably and gave much needed sleep to a patient greatly in want of it In this first stage of the disease a climatic change will sometimes do the greatest amount of good But if a patient can not go away she should at least try to live a healthy life Sleeping out of doors is to be advised Avoidance of all kinds of work should also be insisted on Rest in the recumbent position should be largely taken Diet should be regulated, and in every way the patient should try to lead as careful a life as possible

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* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association at the Fifty seventh Annual Session June 1906

[1] Burrell H L. Boston Med. and Surg Jour, vol. cxlviii No 26

In the second stage of the disease, that in which the tubercle is breaking down and ulcers are beginning to appear, or have already appeared, a vast amount of good can be accomplished by intelligent treatment The best of it is that the poor can be cured, for this treatment can be carried out in hospital practice The treatment of the second stage may be summed up thus The intelligent use of two drugs, corrosive sublimate and nitrate of silver These are strong antiseptics, and have a positive curative action on the tubercle and the ulcer Used in conjunction they sometimes eradicate the disease from an apparently incurable bladder

The use of corrosive sublimate was first brought forward by Guyon, who wrote a number of articles extolling its value in tuberculosis of the bladder The treatment consists of instillations of the solution of the drug every day, or if not daily, as often as the patient can support them A solution of 1 5000 is first tried, thirty or forty drops being instilled drop by drop into the bladder very slowly, by means of a dropper or pipette, if greater amounts are injected severe pain will be produced and the patient will refuse further treatment As toleration for the drug is attained the strength is increased until a solution of 1 500 is used It is not well to use stronger solutions After the first few treatments by the physician the patient may be instructed to make the applications herself If the pain is intolerable a solution of cocain or eucain may be injected into the bladder before the corrosive is used Hygienic rules as to mode of life should be followed, rest especially being insisted on Internally duotal (guaiacolis carbonas, U S P) may be given in the dose of ten grains three times a day Morphia should be avoided if possible The treatment has to be kept up for months before any decided improvement is noticed Patience and perseverance are essential Of course, if this treatment can be given under climatic conditions so much the better, the cure comes sooner At the same time with the Guyon treatment the tuberculous ulcers will have to be treated with the nitrate of silver This is best done by putting the patient in the knee-chest position, and under cocain anesthesia applying the silver stick, mounted on the end of a carrier directly to the diseased surface through a small cystoscope It is best to give ether for the first application of the silver, as the whole bladder can then be thoroughly explored and the cauterization be most carefully and thoroughly done After the first application it is not necessary to etherize again and the silver may be applied to the ulcer under cocain, the application being made as often as once a week or oftener if needed An ulcer will sometimes heal rapidly under this treatment, even if there is a tuberculous kidney above the bladder discharging germ-laden pus into the latter

Cases treated by the combined Guyon and nitrate of silver method are Cases 2, 9, 11, 12 and 18, Cases 9 and 18 were cured, the other three were much relieved

The essentials for the successful carrying out of this method are Correct mode of living on the part of the patient, and surgical cleanliness and infinite patience on the part of the physician A simple tuberculous infection must not be complicated with a secondary infection through unclean instrumentation Attention to routine aseptic precautions will ensure good results It is needless to insist on proper mode of living Diet, care of the body as regards sufficient amount of sleep, etc , are to be insisted on Patience will be taxed It may be months, perhaps years, before marked improvement occurs, but, when it begins at last, the progress toward recovery is sure and steady

The more advanced cases of vesical tuberculosis demand constant supervision by the physician A bladder which has been affected by tuberculosis for a considerable period will possibly have suffered from secondary infection Here we have two germs to consider Such cases present a very much inflamed vesical mucous membrane, with numerous granulations and many ulcers In my experience these bladders are best treated by giving ether and cauterizing the whole mucous membrane with the solid nitrate of silver stick There need be no fear of too deep cauterization, for the burning with the silver does not penetrate far into the tissues Some hesitation was felt in applying this apparently rigorous method of treatment in the first case in which it was used, but the result showed that such fear was without foundation Granulations, especially, are destroyed Secondary contraction of the bladder has not been observed The immediate relief given may, perhaps, be explained by the fact that the silver nitrate forms an albuminate coating which covers the whole vesical surface, thus protecting the sensitive membrane from the irritating urine This coating is cast off very gradually and the last shreds are not expelled for a couple of weeks or more During this time the silver has been destroying the granulations and has been stimulating healing processes, so that these processes have had a good start when the last shreds are voided

Cases 6, 13 and 18 are examples of this method of treatment All were advanced cases, and all were suffering severely at the time the cauterization was done In Cases 6 and 13 the bladder was filled with granulations, which rapidly disappeared after the application In Case 18 there were fewer granulations but there was a large ulcer and numerous tubercles with considerable inflammatory changes in the bladder All these cases were greatly relieved by the treatment and they were all immediately relieved the urinations dropping from thirty or forty a day to four or five a day, within a week at the same time there was a feeling of comfort in the bladder which had not been felt for months before

The ultimate result of these cases may be referred to here Case 6 sustained immediate improvement after the ether cauterization, which l [illegible] during which time the patient urin[illegible] a day and once at nigh[illegible] local applications of silv[illegible] ulations and finally made a good recovery four years after the general cauterization and six years after the nephroureterectomy She has been completely well now for three years In this case the vesical lesions were probably due to a secondary infection because typical tuberculous changes were not numerous

Case 13 was a very bad one of right renal tuberculosis well advanced and probably left renal as well, besides a very badly inflamed bladder filled with small tuberculous ulcers and with granulations which bled at the slightest touch Radical measures were not to be thought of As she was suffering severely and as her physical condition was so far reduced by the loss of sleep in consequence of the half hourly calls to urinate, something had to be done So her bladder was thoroughly cauterized under ether The results were good, the urinations dropping to four or five a day and as many times a night. She left the hospital at the end of a few weeks in fairly good condition, comparatively speaking She died a year later The intermediate history is not known

Case 18 presented a bladder different from the two preceding ones There was a large tuberculous ulcer as well as severe inflammatory changes, a large patch of granulations and numerous tubercles Her bladder was cauterized two weeks after nephrectomy and within a week the urinations had dropped from forty times a day to four or five a day Relief in her case lasted several months Then the symptoms returned and the bladder was cauterized with the actual cautery as an experiment, touching only the ulcerated areas and the tubercles She was made decidedly worse thereby Finally an artificial vesicovaginal fistula was made and she recovered under the Guyon treatment, eight years after the nephrectomy

Surgery—Should the Guyon treatment fail on account of the suffering which it may entail, and this sometimes happens, it is not well to delay in giving the instant relief which an infrapubic cystotomy will afford

This relief after cystotomy is immediate Patients resume their occupations, and above all they can sleep at night A rubber urinal is worn night and day and if it is properly constructed and properly applied it will collect every drop of urine as it drips from the bladder into the vaginal receptacle which is part of the apparatus This rubber urinal does not cause much if any irritation

The after-treatment of vaginal cystotomy is simple and efficacious The patient takes two boric acid douches a day under scrupulous aseptic precautions She also administers the Guyon treatment herself She also continues under the care of the physician who makes applications of silver nitrate to ulcerated areas In the female the vaginal is the only route that need be considered for the cystotomy The suprapubic operation possesses so many disadvantages that it is not worth considering

In advanced cases of the disease, cases in which the bladder has not been properly treated from the start and has become thickened and contracted to a small receptacle holding a few cubic centimeters of urine, in other words, in those cases in which the patient is to be made comfortable until death occurs, a cystotomy offers the greatest possible relief These cases are almost always complicated with renal involvement

It is my belief that early cystotomy should be urged in a greater number of cases, provided the patient is willing to submit to subsequent careful supervision and it is in these cases that the Guyon treatment will work well It is not so painful to administer, for there is free drainage.

Case 9 is illustrative The patient had to earn her living and it was necessary that she should have a proper amount of sleep to enable her to undergo the labors of the day A cystotomy was accordingly performed, with immediate relief She slept well and at once and began to gain in weight The Guyon and nitrate of silver treatment was then given for two years with the greatest persistency and care It was thought that a secondary infection at least would occur, but it did not, for the patient was unusually intelligent and followed instructions At the end of two years, the patient having worked daily at book-keeping meanwhile, she was well, and the fistula was closed The bladder now holds 190 c cm and the patient holds her urine three hours at a time

Tubercular ulcers may sometimes demand excision This will rarely be required, for it is only the deep ones that come in this class and deep ulcers are rare Persistent use of nitrate of silver is to be tried before resorting to excision

Granulations covering ulcers are sometimes seen These granulations cover the ulcers with the greatest nicety and at times rise appreciably above the level They present the appearance of red vascular tufts, bleeding at the slightest touch The best treatment for them is curetting through a large cystoscope, the base being afterwards cauterized with silver nitrate It is needless to say that curetting should never be done in an early case of tuberculosis in which the tubercles are just appearing This opens up fresh areas which may be infected by the germs, besides it does no good

TREATMENT OF THE KIDNEY AND URETER

Incipient tuberculosis of the kidney is best treated by a change of climate, but unfortunately incipient renal tuberculosis is rarely diagnosed, and it is only when the disease is well along and has invaded the rest of the urinary tract that the diagnosis is made If it has not gotten too much of a start, and this may be fairly accurately determined by the amount of pus in the ureteral urine, it is worth while to try the effect of climate Great benefit may result

At the same time it should not be forgotten that this treatment may be most disappointing I have in mind the case of a young man, twenty-one years old, in whom tuberculosis started in the apex of the right lung The disease was taken at the very onset, at as early a time as it was possible for one to make a diagnosis He was sent to Egypt under the most favorable auspices, and remained abroad for a year He then returned home apparently well and with no evidence of active process in the pulmonary tissue He had hardly arrived home when he began to have pains in the right lumbar region, and there soon succeeded "drop" hematuria

This brings up another point with reference to the disease, and that is, the frequent association of tuberculosis elsewhere in the body with the urinary tuberculosis A few years ago I looked up the statistics of autopsies performed at the Boston City Hospital and the Massachusetts General Hospital[2] Among 3 424 autopsies there were 24 cases of caseous renal tuberculosis In all the cases, without exception, there was evidence of tuberculosis in some other part of the body the lungs and intestines heading the list This predominance of tuberculous lungs and intestines suggested these organs as primary foci, inasmuch as they are in direct communication with the outside air Judging from this alone, the urinary tract might have been infected secondarily, and this view of the case seemed to be strengthened by finding old pulmonary foci in two of the cases, while in two others a mediastinal lymph gland and a retroperitoneal gland were presumably the originating sources of infection

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[2] Operations for Tuberculous Kidney Annals of Surgery October 1902, p 516

This point has a decided bearing on the question of operation on the kidney, for no one would willingly do a nephrectomy in the presence of tuberculosis elsewhere in the body, if it could be avoided There can be no question that an advanced tuberculosis of the kidney is best treated by removal of the organ It can only do harm by being allowed to remain in the body and, as it is sure to cause death in time, it is worth while taking a risk in order to gain the comfort which a successful operation will give Should there be an active focus elsewhere in the body it devolves on the surgeon to decide whether to operate or not A moderate degree of pulmonary tuberculosis does not constitute a barrier to the operation, although the prognosis is thereby rendered less favorable as regards immediate recovery and subsequent good health A patient who is suffering intolerable torments from kidney and bladder may elect to take additional risks

The mortality attending nephrectomy is still high I[3] found it to be 17 per cent in a series of 101 cases collected from various sources But this percentage is so much less than that in earlier lists (Bangs, 21 per cent, and Facklam, 26 per cent) that it seems probable it will be still further reduced with improvement in technic and with a better selection of cases

Nephrotomy as a curative measure need not be discussed It has been amply proven that this operation is merely palliative and, if not followed by nephrectomy, will generally leave an intractable fistula When the two operations have been done in succession the results have been brilliant, and in bad purulent cases this should be the rule of procedure In a list of 47 cases in which this was done the mortality was 11 per cent.[4]

Resection is unjustifiable because one can never know if diseased tissue has been left behind

The treatment of a tuberculous ureter is important It should always be removed As regards the mortality of ureterectomy it may be said that it is not to be greatly feared Of course, personal equation counts here, and the skilfull operator has fewer deaths In a list of 16 cases, there was but one death [5]

Nothing will be said of the technic of the operation of ureterectomy, as that does not come within the scope of this paper It may be remarked that a tubercular ulcer within the bladder at the site of the ureteral orific may well be removed by excision with the lower end of the ureter It does not add to the dangers of the operation, and the ulcer is well gotten rid of It may also be said that if the patient's condition is poor at the time of the nephrectomy the ureter may be removed at a second sitting If the ureter is abandoned we may expect further trouble Fistula, secondary abscess, continuance and persistence of urinary symptoms are common, and in a number of cases tuberculosis of other organs has been the cause of death subsequent to the nephrectomy When the lower part of the ureter is alone diseased, the kidney above being healthy, it is difficult to decide what to do As extension to the kidney is pretty certain to be the outcome, nephroureterectomy must be thought of, although, in the case of a bladder not badly diseased, it might be well to try the effect of climate

ANALYSIS OF RESULTS

Of the 18 cases there are but 3 absolute cures, Cases 6, 9 and 18 (16 per cent) Patient 6 has been well two years, patient 9 has just recovered and patient 18 has been well two years This is a discouraging result, and shows the serious nature of the disease It is worth while considering, though, that in both Cases 6 and 18, the kidney was diseased, yet recovery occurred It is also worthy of note that cures were effected in Cases 9 and 18 by cystotomy combined with the Guyon treatment Patient 12 has experienced great relief, and has had little vesical trouble for three years, she urinates 4 times a day and not at all at night, but there is still a slight degree of pyuria She refuses further examination Patient 11 did well, but still has some vesical irritability associated with pyuria She lives at a distance and can not be reached In Cases 1, 3, 4, 5 and 10 there was more or less relief Six of the patients died (33 per cent) from the immediate effects of the disease (Nos 7, 8, 13, 14, 15 and 17) Patient 2 died from an intercurrent affection Patient 16 is in the advanced stages of the disease and will die soon

These cases have been exclusively personal and the histories cover a period of about ten years in all, beginning at a time when Kelly's cystoscope opened up the field for vesical diagnosis, and especially treatment of the bladder in the female

PRIMARY SEAT OF ORIGIN OF THE DISEASE

The question of primary seat of origin of the tubercular process, kidney or bladder, is an interesting one This is a difficult problem to solve on account of the many factors which enter into it In two of the cases the bladder alone was affected, Cases 9 and 17 In these cases it was positive that the bladder alone was the primary seat of origin of the disease, for the ureteral urines were examined and no evidence of renal involvement was discovered

These two cases of strictly localized vesical tuberculosis have an important pathologic interest, because it has never been definitely ascertained how often the bladder is the primary seat of tuberculosis of the urinary tract. Some authors go so far as to say that the bladder is never the primary seat of origin of a tubercular process, while others are equally certain that it is much more common to find tuberculosis originating here than in the kidney Assuming that the cases mentioned were, in fact, cases in which the kidneys and ureters were free from tuberculous disease, the bladder alone having been affected, we find that they constitute 11 per cent of all the cases

This deduction is not conclusive as to the total number of cases in which the bladder might have been the primary seat of the disease, for it necessarily does not include those cases in which the disease might have started in the bladder and afterwards ascended to the upper passages along the ureteral canal or through the lymphatic system

Let us now look at the problem from the point of view of the kidney In the first place the notes of the cases do not show a single instance in which the kidney was the sole seat of the disease at the time the patient came under observation This means that the trouble was not recognized by the patient as a sufficient reason for seeking medical advice in the early stages of the disease In other words, the process may remain latent in the kidney for months, if not years, without giving any more evidence of the serious nature of the affection than an occasional pain in the lumbar region on violent exertion It is only when the bladder has been reached that distressing symptoms occur which demand relief Case 15 is an example of this nature, the renal symptoms having antedated the vesical symptoms by several months Case 18 is also an admirable example of the same nature This patient gave the history of pain in the lumbar region on the right side for many years before the first appearance of any vesical disturbance Case 1 is another example This woman also had suffered from renal pain for many years So long had the last two patients suffered in this way as to raise the doubt that the original renal affection was tubercular Possibly they both had some other disease of the kidney on which the later tubercular affection had become engrafted This further complicates the problem

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[3] Loc cit p 519
[4] Loc. cit., p 518
[5] Loc. cit p 520

Eleven had positive renal involvement, Cases 1, 2, 3, 6, 7, 10, 13, 14, 15, 16 and 18 In all of them there seemed to be sufficient evidence of a tubercular process in the kidney, as evidenced by physical signs and by a rigid examination In eight, Cases 1, 3, 6, 7, 10, 13, 15 and 16 the corresponding ureter was simultaneously diseased In three, Cases 2, 14 and 18, the ureter was apparently free from infection. Of course, it is not always possible to affirm that a ureter is or is not diseased by the means at our present command In the eight cases, with the exception of Case 3, the ureter was enlarged vaginally, in Case 3 it was the upper part of the ureter that was enlarged, as was discovered at operation. Among the remaining seven cases there was positively no renal disease in Cases 9 and 17, but in the other five it was doubtful, judging from symptoms or from physical signs, these latter were Cases 4, 5, 8, 11 and 12 In Case 4 there was an enlarged ureter vaginally, in Case 5 there had been right renal pain for three years, but the patient could not be catheterized, the patient in Case 8 was lost sight of, but it was learned that she died with "a tumor in the left side under the ribs," in Cases 11 and 12 there is still pyuria, although the patients are much relieved, they refuse further examination If we may assume that there is renal involvement in Cases 4 5 and 8, these added to the eleven in which it was positively ascertained that the kidney was affected, give 14 out of 18 cases, or 77 per cent, with renal involvement

This analysis does not help us much in solving the question We can only say that renal involvement appears to be pretty constant but we are left in the dark as to how often the primary origin is in the kidney

It would seem that some light might be cast on this subject if physicians would pay more attention to complaints of lumbar pain localized on one side and complained of for some considerable length of time. If, in such cases, a careful examination of the urine were made as a routine practice and if such examination showed pyuria, a cystoscopic examination should be made at once in order to detect its source In many such cases the kidney might be found to be the seat of a tubercular change Such a routine practice would help us to determine in which organ kidney or bladder a primary tuberculosis is commoner It would also result in inestimable advantage to the patient, for it would be made possible by an early diagnosis to give the sufferer the great benefit of early climatic treatment, so important in these cases

CASE 1—Mrs J H. B, May 19, 1898, age, 36, American

Family History—Negative

Tuberculosis Elsewhere—None apparent.

Symptoms—Constant pain in kidney since 1882, vesical irritability since 1895, gradual loss of strength and flesh

Examination—Large mass under r ribs, no cystoscopic exam, condition of ureters not determined, bladder urine contained pus, blood, casts, epithelia, no t b found, guinea pig test positive

Parts Involved—Bladder, r ureter, r kidney, probably primary in kidney

Treatment—May 19, 1898, r nephrect (Dr F H. Davenport) R ureter much enlarged and gristly, l *in situ*, kidney disorganized and filled with pockets, cheesy pus, tuberculosis

Remarks—Bladder symptoms never marked.

Date of Last Note—Letter received Feb 27, 1906, states that she urinates 6 t. d, and 6 n't, no dysuria or hematuria, urine fairly clear most of time, no pains anywhere except in back, on exertion only, general health good, sleeps well, works every day

CASE 2—Miss E B, June 14, 1903, age 30, American.

Family History—Mother d. "meningitis" Otherwise neg

Tuberculosis Elsewhere—Tuberc. of l. lung

Symptoms—Vesical irritability since June, 1902, painful mict, "drop" hematuria.

Examination—Cystoscope large ulcer next to r uret orifice, general injection, bladder urine contained pus, blood, epithelia, casts and t b Δ = 1 36, l uret urine too small to exam, δ = 51

Parts Involved—Bladder, l kidney

Treatment—Nephrot, July, 1903, sudden kidney abscess (Dr C L Scudder), silver nit for ulcer, duotal, corros subl (Guyon), February and March, 1904, grt relief followed.

Remarks—Tubercular vesical ulcer on side opposite to that of kidney lesion, grt relief, Guyon treatment, l kidney inactive

Date of Last Note—April 5, 1906 Sudden anuria ushered in with severe r kidney pain, nephrot immediately, decapsulation, urine immediately flowed from bladder and loin, death at end of 18 days

Autopsy Small uret stone impacted at upper third of uret, l kidney disorganized.

CASE 3—Mrs A C,[6] Jan 19, 1899, age 37, American

Family History—Mother d pul tuberc., mother's family all phthisical

Tuberculosis Elsewhere—None apparent

Symptoms—Pain in back since 1880, pain in l lumbar region 3 mos, pain in bladder when urine is retained, loss of flesh, vesical hemorrhages, severe one in 1880, another in 1881 smaller ones since, many lately, clots

Examination—Cystoscope, many small ulcers throughout the bladder, r uret. urine contains pus casts and epithelia, no t b found l uret urine neg guinea pig test positive

Parts Involved—R. kidney, uret, bladder

Treatment—R nephrec, April 8, 1899 (Dr Edw Reynolds), upper part of uret also removed, tuberc, kidney adherent to post abdom wall by firm adhesions, tuberc cortex, papillæ and pelvis

Remarks—Crossed symptoms Did adhesions to post abd wall have anything to do with peculiarity? Cure of vesical lesions by means of persistent use of silv nit before nephrec recurrence, same train of symptoms, after interval of 6 years

Date of Last Note—Feb 24 1906 Complete relief for 6 years after operation In July 1905 severe vesical hemorrhage, then incontinence urine pyuria vesical irritability, cystoscope showed numerous ulcers in bladder, condition of l kidney not ascertained

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[6] This patient's case was reported by Dr Edward Reynolds in Bul Free Hosp for Women vol I No 1 She was first seen by the author and then passed into Dr Reynolds care

Case 4—Miss J C, Feb 14, 1906, age 23, American.

Family History—Neg

Tubcroulosis Elsewhere—None apparent

Symptoms—Backache, 2 years, pain in lower abdomen, tired, vesical irritability 5 years, no pain, except when urine is retained

Examination—Kidneys neg, r uret neg, tender over l uret from its middle down, vaginally, l uret much thickened, cystoscope, general injection, many small tubercles in stage of repair, patch of gran tissue to r of l uret orifice, bladder urine contained pus, t b., epithelia, small gran casts, and some blood, r uret urine neg, l uret urine contained epithelia, few small gran casts, some pus cells, guinea pig test neg

Parts Involved—Bladder, lower part l uret, probably primary in bladder

Treatment—Patient had been living in open air a year before exam, much more comfortable since adopting this mode of life, sent back to country, no local treatment.

Remarks—Guinea pig test failed, clinical and microscopic exam unequivocal

Date of Last Note—April 5, 1906, doing well

Case 5—Mrs N C, March 2, 1905, age 60, Irish

Family History—Son d. "pleurisy," grandchild d. "meningitis"

Tuberculosis Elsewhere—None apparent

Symptoms—Pain in r kidney region since 1901, pain in bladder since November, 1894, felt after urination, vesical irritability since 1902

Examination—Cystoscope, general injection, swelling, several ulcers of moderate size, bladder urine contained pus, epithelia blood, hyal and gran. casts, and t. b, free and in clumps

Parts Involved—Bladder and probably the r kidney

Treatment—Desultory, silv nit.

Date of Last Note—April 4, 1906 Patient still has vesical trouble, frequent mict. attended with pain, periods of remission, during which she is fairly comfortable

Case 6—Miss C C, Sept. 30, 1897, age 22, Irish

Family History—Negative.

Tuberculosis Elsewhere—None apparent

Symptoms—Pain in l kidney region and vesical irritability since September, 1896, some incontinence, pain in urethra on urinating

Examination—L kidney much enlarged, l uret. enlarged abdominally and vaginally, resistance over kidney and uret., cystoscope, general injection, swelling of mucous membrane, which bled easily scars, bladder urine contained pus, epithelia, casts and blood, no t. b found, r uret. urine neg, l uret urine contained pus, epithelia, blood and casts

Parts Involved—Bladder, l uret. and kidney

Treatment—Nephrouretereet., Oct. 25, 1897, kidney entirely disorganized by tuberc., uret. much enlarged, removed *in toto*, slow convalescence, fresh air, rapid improvement in bladder symptoms, loin fistula closed Sept. 7, 1898, bladder now showed gran area over l uret orifice silv nit., recurrence, bladder irrit., May, 1899 cystoscope showed bladder filled with gran tissue, whole surface cauterized with silv nit. under ether Oct. 22, 1899, better, urinated 3 to 4 t. d 0 n't., bladder clean except small red area over l uret. orifice, from this time until May 1903, patches of redness in bladder, nit. silv Sept. 14, 1904, well, no bladder trouble, no pyuria.

Remarks—Rapid improvement of bladder symptoms after thorough cauterization of bladder, persistence of "patchy" cystitis, yielding to silv nit

Date of Last Note—March 1 1906 General health excellent, gain of weight bladder does not bother, urinates 2 t. d, 0 n't, no dysuria, no hematuria no renal pain, sleeps well works hard every day and has done so since operation good health for 2 yrs, urine, 1,020 no alb ac. sed., neg, no pus

Case 7—Mrs F J T Sept 15, 1903 age 22, Irish

Family History—Negative.

Tuberculosis Elsewhere—None apparent

Symptoms—Vertigo, loss flesh, diarrhea pains in l lumbar and hypoch regions since 1901, vesical irrit, and pain in urethra on urinating, since 1896

Examination—L kidney twice normal size, l uret much enlarged vaginally, large r kidney, cystoscope, two ulcers, general injection, bladder urine contained pus, blood epithelia and t. b, $\Delta = 53$, r uret. urine, clear, urea 63 per cent sediment, neg no urine collected on left side, $\delta = 58$, guinea pig test positive

Treatment—Nephrec. l. kidney Sept 29, 1903, kidney adherent to diaphragm uret. large throughout, abandoned on account of collapse, complete anuria, nephrot r kidney, October 4, cystic kidney found

Autopsy Complete cystic right kidney, some cysts filled with grumous matter, pure calcic oxalate others filled with clear fluid, giving urea, 63 per cent. same as found in r uret. urine.

Parts Involved—L. kidney uret. and bladder tuberc, r cystic kidney

Remarks—It was thought that the r kidney was hypertrophied through compensation and l enlarged on acct of secondary changes, instead, l was hypertrophied and tuberc while r was cystic. Low urea on r should have been heeded, but absence of urine on l (reflex?) was misleading

Date of Last Note—Patient died Oct. 5, 1903

Case 8—Mrs M. F, Oct 9, 1901, age 38, Irish

Family History—Negative

Tuberculosis Elsewhere—None apparent.

Symptoms—Loss strength, indigestion, pain in l lumbar and hypoch regions since October, 1900, vesical irrit, and painful mict. for some time

Examination—Tenderness over course of l uret. l uret. enlarged vaginally, l kidney neg, cystoscope general injection, few ulcers, patch of gran. tissue on trigon, bladder urine contained pus, shreds, epithelia blood casts and t b, l uret. urine contained casts, blood, epithelia, and very little pus

Parts Involved—Bladder, l uret, probably primary in bladder

Treatment—Curetted, Nov 14, 1901

Remarks—Operative interference steadily refused

Date of Last Note—Patient died October, 1904 For many months preceding death there was large tumor in l kidney region

Case 9—Miss A. F, March 23, 1904, age 28, American

Family History—Negative.

Tuberculosis Elsewhere—None apparent.

Symptoms—Vesical irritability, 7 yrs, severe, 5 mos

Examination—Kidneys and urets neg, cystoscopic, many tuberc in bladder, one large ulcer near l uret. orifice, bladder urine contained pus, blood, a few casts, epithelia and t b r uret urine neg, few gtts urine collected in 5 hrs from l uret urine, contained a little blood and epithelia, guinea pig test positive with bladder urine

Parts Involved—Bladder, primary vesical tuberc.

Treatment—Vaginal cystot., April 2, 1904, from July, 1904 until February, 1906, constant vesical irrigations with boric acid 2 t. d, daily instillations of corros subl, occasional applications of silv nit, occasional dosage with duotal, Feb 24, 1906, urine free from pus, bladder looked healthy, May 16, 1906, fistula closed

Remarks—Perfect comfort after fistula was made, Guyon treatment carried on at home, patient has been earning living since fistula was made Constant improvement and gain in weight since operation

Date of Last Note—Sept 30, 1906 Patient urinates once in 3 hrs, bladder is contracted, holds 100 c cm, being dilated by hydr distension, comfortable

Case 10—Miss G, April 12, 1905, American

Examination—Kidneys neg, r ureter thickened vaginally, base of bladder very much thickened, cavity holds not more than 30 c cm, cystoscope, red gran membrane, ulcerated tho[illegible] easily, bladder urine contains pus,

Parts Invol

Treatment—Resection of r kidney, in 1903, by Dr C G Cumston, relief from kidney pains, cystot

Remarks—Bladder was so thoroughly diseased and reduced in size by tuberc changes it did not seem possible to effect any improvement, incurable

Date of Last Note—Lost sight of

CASE 11—Mrs C H, April 21, 1903, age 50, Irish

Family History—Negative

Tuberculosis Elsewhere—None apparent.

Symptoms—Headaches, vertigo, loss flesh, indigestion, occasional r sided colic and hematuria for 27 yrs, occasional vesical irrit for 27 yrs, but constant lately and attended with painful mict

Examination—Kidneys and urets neg, cystoscope, general injection, on post. wall of bladder large area calcareous matter bladder urine contained pus, blood, epithelia and t b, impossible to catheterize either ureter

Parts Involved—Tuberc, bladder, evidence of old kidney stone

Treatment—Supra pubic cystot, April 28, 1903 (Dr C H Hare), calcareous matter removed, drainage for 6 weeks, closure, Guyon treatment with corros subl until March, 1904, at this time well, urination 3 to 4 t d, 0 n't, no pyuria

Remarks—Kidney has given no further trouble, had period of arrest of disease, lasting many mos, recurred later

Date of Last Note—March 25, 1906, health good, bladder troubles a little at times, urinates 12 t d, sometimes painful, no hematuria, some sediment in urine at times Letter says "Some pains in the region of the kidneys" Still has pyuria (Probably still has the disease)

CASE 12—Mrs A H, April, 1898, age 39, English

Family History—Negative

Tuberculosis Elsewhere—None apparent

Symptoms—Vesical irrit. and painful mict since April, 1907, loss flesh

Examination—Cystoscope, general injection, several ulcers about r uret orifice, bladder urine contained pus, blood, epithelia and t b, ureteral urines neg

Parts Involved—Bladder

Treatment—Silv nit for ulcers, corros subl (Guyon), begun April 25, 1898, and continued until Sept 8, 1903, with almost no interruption, all ulcers healed, bladder practically well at the end of that time, a few red patches alone remaining, urination 4 to 5 t d and none at night

Remarks—This case did very well with Guyon treatment, patient was very faithful in carrying out details

Date of Last Note—Letter from patient March 1, 1906, says she has enjoyed good health 3 yrs, urinates 4 t d, 0 n't., no pains, urine still has pus in it, possibly from vagina, declines further examination. This case might be classed as a cure

CASE 13—Mrs S J, March 18, 1905, age 35, Armenian

Family History—Negative

Tuberculosis Elsewhere—Old Pott's disease of the spine, healed

Symptoms—Loss flesh (40 lbs), fever, headaches, anorexia, pain in both lumbar regions 5 mos, pain over bladder since March, 1904, vesical irrit. (30 to 40 t. d.) since March, 1904, also painful mict same time, abundant hematuria 2 wks

Examination—R kidney tender to touch, enlarged, r uret. enlarged vaginally, cystoscope, general injection, bladder filled with gran bleeding at touch, small ulcers everywhere, stricture and pyoureter on r side, bladder urine contained pus, blood, epithelia, casts and t. b, $\Delta = 97$, r uret urine contained pus, blood, casts and epithelia, $\Delta = 1\ 05$, l uret. urine, same sediment as above, $\delta = 58$

Parts Involved—Bladder both kidneys, r uret

Treatment—Under ether whole bladder was thoroughly cauterized with pure silv nit immediate relief, April 10, 1905, patient was urinating 4 to 5 t d., 3 to 4 n't

Remarks—No severe operation deemed advisable in view of poor general condition and double renal involvement

Date of Last Note—Died Feb 8, 1906

CASE 14—Mrs O., June 7, 1899, age 35, American

Family History—Negative.

Tuberculosis Elsewhere—None apparent

Symptoms—Since 1897 pain in both kidney regions, with vesical irrit and painful mict

Examination—Tender over both kidney regions, r kidney enlarged, cystoscope, general injection, whole bladder gran., red, bleeding easily, numerous ulcers, bladder urine contains pus, blood, epithelia and casts, guinea pig test positive, r uret urine contains pus, blood, epithelia and casts, guinea pig test positive, l uret same characteristics, guinea pig test positive.

Parts Involved—Bladder, both kidneys

Treatment—No operation advised

Date of Last Note—Died November, 1899

CASE 15—Miss A P, July 24, 1905, age 22, German

Family History—Negative

Tuberculosis Elsewhere—None apparent

Symptoms—Headaches pain in back and r kidney region since September, 1904, date of bad fall, vesical irrit and painful mict. 3 mos, only, hematuria of severe type, 3 wks

Examination—R kidney region very tender, r uret much enlarged vaginally, cystoscope, general injection, ulcers everywhere, swollen mucous membrane, Harris' instrument failed to get urine, temporary anuria, bladder urine contained pus, blood, epithelia, casts, many t b

Parts Involved—R kidney, r uret, bladder

Treatment—R. nephrect (Dr G G Averill), July, 1905, kidney tuberc

Remarks—Primary seat of origin was evidently r kidney, as evidenced by pain in lumbar region, which antedated first appearance of vesical symptoms by several months, history of fall is suggestive

Date of Last Note—Died Sept 9, 1905

CASE 16—Mrs M. Q, Jan 15, 1899, age 32, Irish

Family History—Negative

Tuberculosis Elsewhere—None apparent

Symptoms—Backache, pain in r kidney region since 1896, vesical irrit and painful mict. since 1896, several attacks of hematuria lately

Examination—R kidney region tender, r uret enlarged vaginally, cystoscope, general injection, numerous ulcers, tuberc., bladder urine contained pus, blood, epithelia, casts, and t b, guinea pig test positive, r uret urine contained pus, blood, casts and epithelia, guinea pig test positive, l uret urine same characteristics

Parts Involved—Bladder, r uret, both kidneys

Treatment—Desultory, disappeared

Remarks—Tuberc just beginning on l side, disease has existed 10 yrs, has had periods of remission during which she has been fairly comfortable, operative treatment declined

Date of Last Note—Seen April 4, 1906, wasted a good deal, much loss of flesh, has had severe vesical suffering, now urinates 5 to 6 t d, 4 to 5 n't, at times painful, suffers much pain in r kidney at times, none in l

CASE 17—Miss D R., Dec. 10, 1898, age 17, American

Family History—Sister d "meningitis," maternal aunt d. phthisis

Tuberculosis Elsewhere—None apparent

Symptoms—Vesical irrit. and pain in bladder since 1891, pain on urination felt in urethra and transmitted to r heel

Examination—R. kidney region tender, cystoscope, general injection, many tuberc., bladder urine contains pus, blood, epithelia, casts and many t b, guinea pig test positive, uret urines neg, guinea pig tests neg in both.

Parts Involved—Bladder, primary vesical tuberc.

Treatment—Desultory, attempted Guyon treatment

Remarks—There seems to be no question about primary vesical tuberculosis in this case

Date of Last Note—Died Oct 12, 1899, by suicide.

CASE 18—Miss K. S, June 5, 1896, age 21, German

Family History—Negative.

Tuberculosis Elsewhere—Tuberc. glands of neck as a child, scars still visible

Symptoms—Pain in r kidney region since a child, vesical irrit. and painful mict since June, 1905

Examination—Large r kidney, tender over r kidney region, cystoscope, general injection, several areas gran tissue, which bled easily, a large ulcer near r uret orifice, bladder urine contained pus, blood, epithelia, casts and t b guinea pig test positive, r uret urine contained pus, blood, epithelia, casts and t b in large numbers, l uret urine neg

Parts Involved—Bladder, r kidney, from history, probably primary in kidney

Treatment—R nephrect June 20, 1896, cautery of whole bladder under ether, with pure silv nit, July 10, 1896, grt relief, urination dropped from 40 t d to 4 t d in one week, perm potass irrigations until May, 1897, not efficacious, in August, 1897, getting irritable again, Oct 2, 1897, cautery of tuberc and red patches with galv cautery, made worse, Guyon treatment, February, 1898, until April, 1899, no improvement, artificial vesico-vaginal fistula, April 25, 1899, cease Guyon treatment, comfort, from now until March, 1904, boric acid irrig , occasional applications of pure silv nit and injections of icthyol and glycerin, March 12, 1904, Guyon treatment resumed and continued until Oct 24, 1904, when fistula was closed, with success, patient has been completely well ever since, no pyuria, no vesical irritability

Remarks—Cure could have been effected sooner had Guyon treatment been instituted at time fistula was made

Date of Last Note—Patient has been well 2 years

URINARY INCONTINENCE

THE TREATMENT OF CERTAIN FORMS BY THE FORMATION OF A VESICO-VAGINO-RECTAL FISTULA, COMBINED WITH CLOSURE OF THE INTROITUS VAGINÆ *

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Incontinence of urine in the woman is usually due to a vesico-vaginal fistula The ordinary varieties of such fistulæ are easily cured by plastic surgery if modern methods be employed Even large fistulæ involving a considerable portion of the vesico-vaginal septum and surrounded by dense scar tissue can be successfully closed by loosening the attachments of the bladder, separating this viscus from the vaginal wall and closing the rent in the bladder wall by a separate suture But there always will remain cases where the neck of the bladder and portions of the urethra have been so destroyed as to preclude the restoration of the sphincter urinæ muscle, so that continence will be established Under such circumstances the surgeon must consider the following procedures

1 He can construct by a plastic operation an urethra which will serve as a channel for the urine, but leaves the patient without control of the stream This is always an unsatisfactory procedure as far as the patient is concerned By various devices, such as tamponade of the vagina, the sphincterless urethra may be shut off and the urine controlled to a certain extent But the patient is never completely satisfied and her dissatisfaction would seem justifiable

2 He can utilize the rectal sphincter by diverting the urinary stream into the rectum either directly by an anastomosis between the bladder and rectum or indirectly through the formation of a recto-vaginal fistula with a subsequent closure of the introitus vaginæ

The following case will serve as a text for the discussion of the last-named procedure

History—Mrs P , aged 60, married, was referred to me by Dr M. C Strong, of Jackson Her present trouble dates back one year, when she began to experience pain, burning and irritation in the neighborhood of the meatus urinarius The pain was worse when she was on her feet, micturition was quite painful and has become more so recently

Examination—On entrance to my private hospital, Oct. 17, 1904, the meatus urinarius was found to be the seat of a growth the size of a cherry It was dark red in color and sprang from the upper and lateral walls of the meatus The growth was somewhat hard and the induration extended up the urethra for about 2 cm The inguinal glands were not enlarged. A piece of the growth had previously been removed and pronounced malignant by a competent pathologist

Primary Operation Oct 17, 1904—Removal of Growth at Meatus Urinarius—A circular incision was made 1½ cm outside and beyond the growth The line of demarcation between the upper normal and lower injected mucosa was plainly visible and was situated about 2½ cm above the meatus The urethra was dissected out and amputated about 1 cm above this point The urethral mucosa was then stitched with interrupted silkworm gut sutures to the vestibule So much of the urethra was removed and the integrity of the muscular structures was so impaired that the expected incontinence followed From the time of the operation the patient practically had no control over the urine The amputated urethra healed by primary union and the patient was discharged Nov 9, 1904

The patient re entered the hospital March 18, 1905 The incontinence had continued since the first operation and the patient complained of great soreness and irritation about the site of the operation Examination showed the remnant of the urethral opening, measuring 1½ cm in diameter Through this opening protruded the bladder mucosa, forming an external tumor the size of an English walnut The bladder mucosa was reddened and at one spot was a superficial ulcer 4 mm in diameter

Second Operation March 22, 1905—*Formation of a Vesico-Vaginal Fistula and Closure of the Urethral Opening for the Purpose of Curing a Prolapse of the Bladder*—A centimeter and a half incision was made in the vesico vaginal septum 2½ cm above the cervix The edges of the vesical and vaginal mucosa were united by interrupted catgut sutures The prolapsed bladder was replaced and the edges of the opening freshened outward for a distance of 2 cm The clitoris and upper part of the labia minora were removed during this process The aperture was closed by a continuous catgut suture, the overlying tissues being drawn together laterally by interrupted silkworm gut sutures Both wounds healed by primary union and the patient left the hospital April 12, 1905

The patient consulted me again June 3, 1905, complaining bitterly of the irritation arising from the continual flow of urine from the vagina Examination showed perfect closure of the urethral opening, with no bulging There were great reddening and signs of irritation about the vagina, labia and buttocks, arising from the continuous urinary flow The patient asked that something be done for her relief and elected the following operation after its disadvantages and advantages had been fully explained to her

Third Operation, June 4, 1905—Utilization of Rectal Sphincter by the Formation of a Recto Vaginal Fistula, with a Subsequent Closure of the Introitus Vaginæ—The sphincter muscle was thoroughly stretched and partially paralyzed A longitudinal opening, 2 cm in length, was made in the recto vaginal septum, just above the internal sphincter The vaginal and rectal mucosal edges were united by interrupted catgut sutures The remainder of the labia minora were removed, and the surface about the introitus freshened for a distance of 2 cm The vagina was closed with interrupted silkworm gut sutures, care being taken to prevent any strain on the stitches The rectum was drained by means of a large sized rubber tube This tube was removed at the end of four days, after which time the patient passed her urine every two or three hours by way of the rectum, having of course perfect control over the urine The vulva stitches were removed at the end of a week, union by first intention resulting After the first few days there was one or two partially formed stools daily The patient was fairly comfortable on leaving the hospital about three weeks after the operation She experienced some pain just prior to the passage of the urine per rectum This she attributed to gas passing upward into the vagina, as it was always relieved by the passage of the urine. The patient had to get up once or twice only in the night and was able to retain the urine about three hours in the day time.

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* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association at the Fifty seventh Annual Session June 1906

Subsequent History—The patient was very comfortable for a time Then she found the urine was not passing freely and that straining and pain were of frequent occurrence. August 13, 1905, she was examined under chloroform, and, as suspected, the recto vaginal opening was found contracted, thus preventing a free passage of the urine The opening was now made 4 instead of 2 cm in length, the work being done through the dilated anal opening The vagina was carefully palpated and inspected and appeared perfectly normal A catheter was passed into the bladder by way of the recto vagino vesical opening and a small amount of urine collected. Careful chemic and microscopic examinations showed this urine to be perfectly normal For a time the patient was very comfortable. Then she began to have considerable pain in the region of the bladder and the urine seemed to irritate unless large quantities of water were ingested and internal antiseptics were administered.

March 10, 1906, she was again examined under chloroform The recto vaginal opening was patulous and admitted the forefinger with ease. The vesico vaginal opening, however, was greatly contracted This was dilated and a calculus 1½ cm in diameter removed from the bladder The vesico vaginal opening was made twice its original size and urine withdrawn from the bladder for examination Again it was found perfectly normal. The patient has been in good health since the removal of the calculus The rectum apparently serves very well as a substitute for a bladder She is able to retain the urine three or four hours and has to get up twice only during the night.

The credit of suggesting the utilization of the rectum and the anal sphincter as a substitute for the bladder and urethra is due to E Rose He operated on his first patient in 1872 The vesico-vaginal fistula resulting from the extensive destruction of the bladder wall was transformed into a vesico-vagino-rectal fistula with complete success so far as the rectal urethra was concerned Death followed ten months later from a nephritis brought about by the previous attack of diphtheria. His second patient was operated on for an incontinence following extensive carcinomatous disease It was a success so far as the function of the rectal urethra was concerned, but death resulted later from extension of the carcinoma His third patient was operated on nineteen years before his final report.[1] The patient had had various operations for a vesico-vaginal fistula consecutive to a rupture of the bladder and was given up as incurable. A vagino-rectal fistula was made and the introitus closed The patient had been employed as a maid of all work during the nineteen years and had been in good health She not only urinated, but also menstruated through the anus, with no resulting infection, as far as could be observed, of either uterus or urinary tract The autopsies on the first two patients showed no signs of inflammation in rectum or vagina.

INFECTION AS A SEQUEL OF DIVERTING THE URINE INTO THE INTESTINE

Fortunately, the surgeon can speak more authoritatively on this point to-day than formerly The results of experimental and clinical work may be summed up briefly as follows The urinary stream, either from the ureter or bladder, can be safely diverted into the intestine for the purpose of utilizing the anal sphincter, if the vesical ureteral orifices remain intact On the other hand, pyelonephritis in varying degrees of intensity always follows the anastomosis of the severed ureter with the intestine I have gone into this subject at some length in a paper dealing with the anastomosis of the ureters with the intestine, which was published in 1901[2] Hence I had no hesitancy, so far as infection was concerned, in advising my patient to submit to an operation for the formation of a rectal urethra Infection is not to be feared, because in a vesico-vagino-rectal fistula the ureteral orifices remain intact and act as a safeguard against pyelonephritis There are many cases in the literature where patients have lived for years without signs of kidney lesions after the formation of a vesico-rectal fistula from the passage of a vesical calculus into the rectum Keen's case is particularly interesting The introitus was closed for the relief of a patient suffering from a vesico-vagino-rectal fistula Twenty-two years subsequent to the operation the patient was in perfect health, with no sign of renal infection Additional proof is furnished by the present case, where two careful examinations of the urine removed months after the operation failed to show any signs of renal infection

THE PASSAGE OF FECES INTO THE VAGINA.

I do not believe that this occurs to any great extent Contrary to expectation, patients with rectal urethras do not suffer from diarrhea They have one or two well-formed stools daily Consequently the tendency of the fecal matter is to pass by the recto-vaginal opening In my experience patients with recto-vaginal fistulæ are not so much annoyed by the passage of feces as of gas by way of the vagina Any slight amount of fecal matter finding its way into the closed vagina will be washed back again into the rectum by the constantly flowing urine In the reported cases, my own included, particular mention is made of the freedom from irritation of the vagina.

THE FISTULOUS OPENINGS

The truth of the above remarks are more or less dependent on the size of the newly-formed recto-vaginal fistula Obviously, if the entire septum should be removed, the feces of necessity would pass into the vagina Hence the opening must be neither too large nor, on the other hand, too small Dread of the passage of the fecal matter into the vagina led me at the primary operation to make the recto-vaginal opening too small, necessitating subsequent enlargement. I believe it can with safety be made four centimeters in length Its width should be two centimeters or less and the edges of the rectal and vaginal mucosa should be brought together with sutures to prevent subsequent contraction The vesico fistula should be made a trifle smaller and if the edges of vesical and vaginal mucosa unite by primary union very little contraction will take place Even in case of subsequent contraction the apertures can be easily dilated from time to time under an anesthetic, a procedure far preferable to enduring the discomforts of incontinence

THE RECTUM AS A SUBSTITUTE FOR THE URINARY BLADDER.

Experimental work and clinical cases have shown that the rectum tolerates the presence of the urine and acts as a good substitute for the urinary bladder The patient has good control of the anal sphincter, the urine being passed, as a rule, only about once in two or three hours in the daytime and only twice at night No irritation of the rectum seems to result.

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[1] Deutsche med. Woch. 1903, No 24

[2] The Journal A. M. A., Feb 16 23 March 2, 9 16 and 23 1906

CLOSURE OF THE INTROITUS VAGINÆ

It must be borne in mind that the operation under discussion is for exceptional cases of such a nature as to preclude the hope of relief by plastic surgery Hence these women are in a pitiable condition and should not be expected to perform their marital duties, much less expose themselves to the risk of pregnancy At least in two cases closure of the introitus was made during menstrual life, and the women menstruated through the anus without any resulting ill effects There is no particular difficulty in securing closure of the introitus at the first operation, provided the stitches are so passed as to preclude urinary contamination The tendency of gas to pass from the rectum to the vagina can be combated to a great degree by a proper regulation of the diet

DISCUSSION

ON PAPERS OF DRS GARCEAU AND PETERSON

Dr. C P Noble, Philadelphia, said that he thought that Dr Garceau was very moderate in his statements as to the curability of this condition In his experience it is far more curable than Dr Garceau stated He operated on 16 women, and all of them recovered and are now in sound health Without any exception they made perfect recoveries. With reference to tuberculosis of the bladder, the question of treatment resolves itself as to whether it is primary or secondary to the kidney, and by doing a nephrectomy or nephroureterectomy it will be followed by a spontaneous cure, if secondary He has been surprised at the facility with which the women got well. The only man operated on by him, who had tuberculosis of the tract with lung involvement, died at a subsequent date So far as early diagnosis is concerned, he long ago gave up all methods, with the exception of securing the urine and injecting it into guinea pigs This, he said, is the only certain way not to confuse the smegma bacillus with the tubercle bacillus He is convinced of the curability of this trouble In one case he was misled He had a patient with tuberculosis of the kidney and bladder whom he sent home to die, but without any treatment she made a good recovery

Dr J Wesley Bovée, Washington, D C, agreed that the results depend largely on whether or not the disease is localized in those organs The affections of the bladder disappear if the kidney and ureter are removed, but many cases are found in which not sufficient is done, that is, the kidney is removed and the ureter is left, and the disease tends to get worse. It is necessary to do more than one operation in these cases Surgeons are not justified in saying that the bacillus is not found, because they are found in urine otherwise normal, so that the presence of the tuberculosis alone is not a positive indication as to the presence of tuberculosis in the kidney

As to the cases reported by Dr Peterson, one point is the danger of infection following the operation due to the contamination of the vagina and bladder with rectal contents If the introitus is closed the opening into the rectum should be near the sphincter Make the closure higher in the vagina and get away from the sphincter as irritation of it means more frequent evacuation. It is interesting to know, he said, whether the vaginal secretion has a bactericidal action on micro organisms in the presence of urine, as it has in the absence of urine If he were to do an operation diverting urine from the bladder to the rectum making use of the rectal sphincter as a sphincter he would form an artificial bladder from the rectum, bringing down the sigmoid and attaching it also, having the sphincter ani muscle act In these cases it can be done as a preliminary procedure, and then the opening can be made through into the newly made bladder and there would then be no risk of future contamination

Dr. Emil Ries, Chicago, said that in the case reported, undoubtedly various other methods could have been considered, and one was mentioned by Dr Bovée He thinks in a similar way the Freund operation could be considered, that of turning down the uterus and utilizing it for plastic purposes Freund's first case was operated in 1894 and the patient had exceedingly good sphincteric action In Dr Peterson's case the woman had passed the menopause Perhaps, he said, the uterus in his case could have been used for sphincteric purposes In the same way the Maydl operation can be considered But the only one who can determine what is the best operation for the case is the one who had to do the work and had the case before him

Dr R. Peterson, Ann Arbor, Mich, said that the implantation of the trigonum with the ureteral orifices into the sigmoid or rectum (Maydl's operation) is the ideal method of diverting the urinary stream into the bowel But it certainly is a more dangerous operation than the one he employed, and his patient was not inclined to take any unnecessary risks He emphasized the point that when the vesical ureteral orifices are preserved intact, there is very little danger of ascending renal infection, no matter what method of anastomosis is employed The presence of the calculus in his case should not be counted against the operation Having nothing to go by, he made the openings between bladder, vagina and rectum too small.

CONSERVATIVE SURGERY OF THE OVARIES *

EDWARD REYNOLDS, M.D

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In recent literature it has been usual to speak of the conservative surgery of the uterine adnexa as though it were one subject In point of fact, the resection of diseased tubes and the conservation of the ovaries belonging to them is usually brought to our attention in inflammatory cases and the question then hinges mainly on the condition of the tube, i e, on the possibility of its restoration to functional value, as balanced against the possibility of reinfection of the pelvis from the patent stump In this class of cases the condition of the ovary is usually a subordinate matter These cases are etiologically in a different class from those which present normal tubes and neoplastic ovaries They are also distinct clinically since in the latter class the decision rests wholly on the state of the ovary I believe that confusion has been wrought, that clearness of thought has been lost, by treating the two classes as one Though both are equally important, in this communication I limit myself to the subject of the surgical treatment of neoplastic ovaries with normal tubes [1]

The advisability of the conservative surgical treatment of the ovaries must plainly be determined by observation of the ultimate results of such surgery in practice, and this is usually computed by statistical reports of a series of cases, to which is commonly added the judgment of the individual operator

I think most of us are satisfied that the application of the strictly statistical method to questions of such comparatively vague nature as the ultimate influence of a conservative operation on the nervous system and general health of a patient is not only capable of producing any result to which the general judgment of the reporter tends, but is practically certain to result in support of the side of the case for which he is arguing I find myself so little influenced in such matters by the percentages deduced from the tabulation of long lists of hospital or otherwise more or less forgotten cases, that in preparing myself for this paper I determined to limit my review of my own experience to the cases of those patients in my private practice whom I have been able to keep track of for at least a year and a half and who were at the same time recent enough for me to be able to retain some personal recollection of them in addition to my records This gives me 29 cases operated on between December, 1902, and February, 1905 Most of these patients I have seen from time to time, the remainder I have looked up recently, and I have used the study of these 29 cases as a basis for the modification or confirmation of the general opinions which I have formed in the course of my work I believe the deductions to be more valuable than they would be if they had been drawn from the much larger number of less closely observed cases of which I have records from my hospital and consultation practice The cases quoted are briefly reported at the end of the paper

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* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association at the Fifty seventh Annual Session June 1906

[1] From a clinical standpoint there are of course cases in which cystic ovaries are attached to inflamed tubes or in which the tube attached to neoplastic ovaries is slightly inflamed but even from a clinical standpoint the cases usually arrange themselves clearly into one or the other class and the existence of transitional cases may clearly be disregarded from the academic point of view

My subject proper may perhaps be summarized as dividing itself into two questions What ovaries should be subjected to conservative surgery? By what method or methods of technic should the ovaries so selected be treated? In the attempt to answer these questions I give, then, my own conclusions as deduced from experience, believing that this is the best contribution I can make to this discussion

WHEN CONSERVATIVE SURGERY IS ADVISABLE

In any consideration of the conservation of the ovaries it is necessary to remember, first, that there are two ovaries, and, second, that so far as our knowledge goes one ovary is functionally as satisfactory as two There is a general impression among surgeons, with which I am personally inclined to agree, that the existence of distension from cystic disease in one ovary tends to excite the appearance of similar trouble in the other It is my rule that if one ovary is extensively cystic, while the other is normal, it is better to remove the cystic ovary completely, even though it contains some ovarian tissue which might be conserved, but at the risk of further cystic disease If both ovaries are considerably affected the better of the two should be operated on first by conservative methods If it proves that but a small fragment of ovarian tissue is left, the same conservative efforts should be made on the other side, if, on the contrary, the conservative care of the first ovary leaves a substantially normal organ, and the second is extensively diseased, I think it is better to remove it If both ovaries are slightly affected, as for instance by only one or two small superficial cysts, I think it is best that both should be subjected to conservative operation For the rest, in applying the principles of conservative surgery to the ovaries, we must be guided partly by the physical and pathological characteristics of the individual neoplasms, and partly by the age of the patient, and as a matter of convenience in arrangement, I discuss the latter first

The object for which conservatism is adopted is the preservation of the functions of the ovaries These organs possess certainly two functions and possibly a third First, their products are essential to conception, second, they govern or in some way are essential to the menstrual phenomena which are intimately connected with the woman's whole physiology during the central or active period of life, thirdly, they may or may not influence the woman's general constitutional condition through the reabsorption of a so-called internal secretion

In the majority of cases child-bearing becomes unlikely at or about forty, and in most cases at that age the bare possibility of this which remains has usually become less important, menstruation ceases on an average about forty-five, in women after this age the only value of the ovaries lies in the somewhat hypothetical importance of their so-called internal secretion, and even the strongest advocates of this theory admit its decreasing importance as time goes on after the menopause The value of conservatism should then be estimated differently for each of these three periods of life, i e, for young women, for those approaching, and for those who have passed the climacteric

In weighing the importance of preserving the ovaries in a given case the possibility and desirability of child-bearing stands first It may be admitted that in young women with the prospect of maternity ahead of them it is always desirable to do the most conservative operation which offers a fair prospect of freedom from further ovarian disease, and if, in these days of the safe and easy performance of the lesser abdominal operations, the case is fully explained to the patient from a fair standpoint there are very few young women who will not cheerfully accept the possibility of a second operation of this nature after the lapse of some years, rather than lose both ovaries at the first operation In women approaching forty, with whom the probability of child-bearing is decreasing or problematical, its importance will be decided by the social state, the existence of other children, and such considerations, and for women well over forty this consideration fails

In my experience, however, the age of the patient is of perhaps equal importance as regards the government of menstruation, i. e, the amount of nervous trouble which may be expected after a castration, or avoided by a conservative operation From puberty to maturity the tide of sexual life is rising and is one of the dominant forces in the woman's whole physiology, health and happiness To dam it suddenly at this age spells a neurasthenic catastrophe in a very large percentage of cases In some cases it may be necessary but it is always to be avoided if possible From twenty-five to thirty-five the tide is full and is of almost equal importance, though I think a larger percentage of women will now avoid an actual nervous breakdown after a castration From thirty-five on the tide is on an average ebbing I think it is not generally appreciated that for many years before the actual cessation of the catamenia there is a gradual natural preparation for it As a rule the intervals between conception lengthen, the sexual impulses slacken and, with occasional exceptions, as the woman passes into middle age the sexual life becomes progressively of less and less dominant importance

This point of the effects of castration I have been obliged to study from another set of cases I have seldom been among the first to adopt new operations I think I have been too slow in becoming convinced of the importance of the conservation of the ovaries in every young woman where it is possible It is only within the last five years that I have been pursuing the conservative operations steadily, and with the many cases of destructive inflammatory disease, of malignant disease, and of the other conditions which render the retention of the uterus inadvisable the list of total ablations in the middle-aged must always remain a large one My own experience has been far too small Again confining myself to my private practice and to those patients whose personalities I remember well and who fall within the same period of time I have been able to refer to a quite large list of such cases, and on reading over their records I have been confirmed in my previous impression that in women from 35 years of age and over the percentage of nervous disturbance from the forced menopause is an increasingly small one, until after forty it becomes insignificant

Of late years in a comparatively small number of cases I have avoided the removal of normal ovaries in hysterectomy for uterine disease, but have seen no difference in the results and have become convinced that in women of middle age at least the importance of the so-called internal secretion is at most but trifling and, I think, non-existent, but on this point my experience is as yet too small to justify a firm conclusion

My general position as derived from my experience is, that allowing for modifying circumstances the importance of conservatism varies inversely with the age of the patient, that on the average it is not to be advised after the latest thirties, but is to be insisted on in almost every instance in young women, and, again in my opinion, its importance is but little affected by the variations in the pathologic character of ovarian neoplasms, with the single exception of malignancy

Malignant neoplasms are from their very nature excluded from consideration in conservative surgery, but in the surgery of the ovaries there may be one possible and rather theoretic exception, i e, the existence of one normal and one malignant ovary in the case of a woman for whom pregnancy is especially desirable In such a case it might be justifiable to leave the normal ovary undisturbed but under close observation

CLASSIFICATION OF OVARIAN GROWTHS

The pathologic classifications of benign enlargements of the ovary are still clinically blind From the clinical standpoint we are very little, if at all, guided in our treatment by the pathologic question as to the origin of the cystomata from Pfluger's tubules, the Graafian follicles, the Mullerian ducts or the Wolffian body, and are mainly influenced by their physical condition, i e, the size and number of the cysts and their situation in the ovary A convenient classification of the benign growths is

A. Cysts originating from the corpora lutea.
B Dermoid cysts
C So-called simple Graafian cysts
    1 Single or multiple of size sufficient to form tumors external to the ovary
    2. Enlargement of the ovary by numerous small cysts within the stroma (Rokitansky's tumor)
D Enlarged sclerotic ovaries.

TECHNIC

The conservation of the ovaries seems to me of almost equal importance in all these varieties and even the technic of their treatment is affected more by the size and number of cysts, and by the physical characteristics of uniformly enlarged ovaries, than by their exact pathologic character These lesions may be treated by

A. Evacuation puncture and removal of the lining membrane with or without suture.
B. Resection
C. Bisection of the ovary and multiple puncture or resection.
D Scarification or multiple incision of the surface

Corpora Luteal Cysts—The smaller cysts from the corpora lutea and those ovaries which contain not more than half a dozen small surface cysts from the Graafian follicles are peculiarly adapted to puncture of the cysts and the removal of the lining membrane

If an ovary which contains a persistent and abnormally enlarged, and enlarging corpus luteum be seized between the thumb and finger in such a way that moderate pressure is put on the base of the cyst and the distal surface of the enlargement incised by the knife the whole mass may usually be expressed on to a sponge, leaving a clean surface of normal ovarian tissue behind it The thin edges of the cyst may require trimming by the scissors but it is often surprising how small a surface is left after the removal of a cyst of considerable size, and in cysts of this character up to the size of an English walnut after the trimming of the thin cyst walls the surface left can usually be closed with a few fine sutures, without the loss of any ovarian tissue and leaving a normal organ behind it

Cysts of the Graafian Follicles—In similarly small cysts of the Graafian follicles if the ovary be seized in the same way and a pair of snap forceps is forced through the cyst wall while a sponge is held to catch the fluid, the forceps may be made to seize the lining membrane, and it is surprising how often by a movement of torsion of the forceps the whole lining or active portion of the cyst can be twisted out intact, and again without the loss of ovarian tissue In many of these cases no suture is needed, the cyst wall of cysts as large as a hazel nut often shrinking together in such a way as to leave little or no cavity, and but a small puncture which has ceased to bleed before the operation is completed The situation of that ovary is but little different from that which follows the normal rupture of the follicle In instances which do bleed I have never seen trouble follow the insertion of deep sutures of fine silk, whipped over and over in such a way as to compress the whole base of the evacuated cyst I have been surprised to find that the cases in which I have used fine silk for deep ovarian sutures have shown no more subsequent pain or trouble than when I have used an absorbable suture After the removal of even four or five cysts by this method no ovarian tissue has been lost, and the organ is in a practically normal condition The excision of each of numerous cysts would have left a much mutilated organ, but this process must be limited to fairly superficial cysts

Careful perusal of my records shows that while a few cases treated in this way have temporarily had heavy and distinctly enlarged ovaries for a few months after the operation, the ultimate results have been exceedingly satisfactory These were probably cases in which I underestimated the importance of oozing within the cyst cavity and neglected to place sutures where they should have been used, and the temporary enlargement in these instances was probably due to the formation and subsequent absorption of a harmless clot within the cavity Unfortunately my records have seldom been detailed enough to enable me to postulate this, but the results make it tolerably evident The cases to which I am limiting myself are not sufficiently numerous to warrant any statistical conclusion, but all have been subjected to careful depletion in after treatment whenever there was any reason for it, and so far I have not been obliged to operate a second time for any of these cases

Large Cysts—Dermoid cysts, large tumors from the corpora lutea and large single or multiple, so-called Graafian cysts must be treated by excision and here I have learned of late a fact which I chanced on by accident and which I have reason to believe is known to but few operators. I have seen several instances of large cysts varying from the size of an orange to that of the adult head which appeared to have destroyed the entire ovary, i. e., in which no trace of ovarian tissue could be seen about the pedicle of the tumor, but in which it was, nevertheless, possible to conserve a normal and practically normal sized ovary. The first of these cases was that of a young girl about to be married in whom both ovaries were much enlarged and for whom I had promised to save any scrap of normal ovary. One ovary was distended to, perhaps, twice the size of a large English walnut by a great number of small cysts. This I felt obliged to remove. The other consisted of a single cyst, evidently of so-called Graafian origin and of about the size of a small orange. Its walls were uniformly thin and translucent, except at the hilum, where they were thick and white over perhaps the basic fourth of the tumor surface. With little hope of finding any ovarian tissue, but in strict pursuit of my promise, I made a careful superficial incision through the edge of the thinner part until I had exposed the thin translucent cyst wall under it. Passing the handle of the scalpel into this and separating the thin internal wall from the thicker external portion by blunt dissection, I found a plane of cleavage and was able to shell out the thin walled cyst entire, hoping against hope that I might find some small portion of ovarian tissue about the hilum. To my surprise the circle of thicker wall about the hilum so left retracted after the removal of the cyst into the shape and size and to all appearance the substance of a normal ovary. Several subsequent but less marked cases have led me to hope that there are but few cases of large single cysts of a benign nature in which this process may not enable us to preserve some portion of a normal ovary. I have gone into this phenomenon in detail because, although it may be known to many of you, it is new to me, and, from conversations with a number of experienced surgeons, I am confident that there are some of you to whom it will be as interesting and unexpected as it was to me.

Rokitansky's Tumor.—The condition known as Rokitansky's tumor in which the ovary is distended by very numerous small cysts lying not only on the surface, but throughout the stroma, each being thin walled, simple, and with no noticeable lining membrane, demands a different treatment. Until recently I believed them unfit cases for conservative treatment. I still look on them as the least hopeful and would remove a well-marked ovary of this character if the other were comparatively normal and fitted for conservative treatment. My experience of the conservative treatment of these ovaries is still too limited to enable me to draw safe conclusions, especially as the cases which I have treated by the technic I am about to describe are all among the more recent from which I have dared to draw conclusions, but the few cases which I am able to quote are all improving enough to make me feel that I shall, with some caution, pursue this line in the future. The little knowledge that I have is empirical, but the stroma of these ovaries is always edematous, the ovaries feel uniformly tense and swollen, and, acting on the theory that this abnormal tension probably favored the continued production of the cysts, I have first punctured with a blunt instrument (a fine pointed small artery forceps) all the superficial cysts, then seizing each end of the hilum with compression forceps in order to lessen bleeding, and with the ovary drawn outside the abdomen and surrounded with gauze, I have bisected it from end to end and from the edge almost to the hilum, with the knife, and guided both by sight and by palpation of each half between the finger and thumb, have pushed the closed fine pointed artery forceps into every cyst that could be seen or felt, however numerous or small they might be. These numerous punctures sufficiently drain the ovary which becomes soft and flabby in the process. I have then removed the forceps from one end of the hilum, passed a needle, armed usually with fine silk, through the tissues below the ovary at about one-third distance in from the edge of the hilum and tied the suture tightly, thus cutting off about one-third of the circulation. Passing the needle again through the tissues below the ovary, I have drawn the thread around the whole ovary while the divided halves are held in apposition by the finger and thumb, and again passed the needle through the tissues below the ovary so that the stitch encircles the whole organ, holding one end of the divided halves together. Repeating this stitch again and again, the whole ovary is whipped together by successive encircling loops of silk, the needle being passed entirely beneath the ovary in the tissues of the broad ligament or through the ovarian substance, as from time to time may seem most appropriate and best calculated to hold the bisected halves in apposition. The stitch is then finished by a final knot which compresses the circulation at the other end of the hilum, again for about a third of its length, some two-thirds of the circulation being thus effectually cut off. I have reached this apparently somewhat reckless use of fine silk, or at times catgut, in the ovarian tissues by gradual stages, but have grown to be confident that deep stitches even of silk through the ovarian tissue produce no after pain or ill results. As a whole, the after history of these cases has been that such ovaries have been heavy and again enlarged somewhat after operation, and with some persistence of symptoms but that both physical conditions and symptomatology have then gradually improved and so far as I can see have been followed by eventual recovery.

Enlarged Sclerotic Ovaries.—The enlarged sclerotic ovaries I have considered until very recently entirely unfit for conservative operation in cases in which they were causing sufficient symptoms to demand any operation whatsoever, and I believe that substantially enlarged sclerotic ovaries have usually been removed by operators when met with as probably promising future trouble. In some cases in which I have met with them incidentally in the course of operations undertaken for other reasons, as, for instance, in myomectomies, and in which I was unwilling to remove them, I have freely scarified their surface with the knife, making parallel cuts from a sixteenth to an eighth of an inch deep and perhaps a quarter of an inch apart over the whole external surface of each ovary and have been inclined to believe that subsequent examination has shown that they have decreased in size, but the cases are too few and too recent to warrant any conclusions. I can only say that the treatment seems innocuous and promising enough to be worth trying when occasion offers incidentally.

CASE SUMMARIES

Case 1.—Mrs. C. W. (No. 2277). Referred by Dr. Hodgdon. Operation Nov. 1, 1904. Both ovaries about twice the normal size, and showing numerous small cysts. Right ovary, a corpus luteum, removed by excision, ovary split, and several small oblique cysts punctured with forceps, closed with silk. Left ovary several superficial cysts punctured and lining pulled out.

Sutured with silk Suspension and appendectomy Repeatedly and recently examined. Ovaries have remained small. No pregnancy

Case 2 —Mrs W (No 1716) Operation Sept 24, 1902 Right ovary size of lemon, removed. Left ovary, one cyst about size of a grape, punctured and lining pulled out. Numerous small cysts of Morgagni removed. Myomectomy of small fibroid, appendectomy, discission of os uteri. Recently and repeatedly examined. Remaining ovary has never enlarged. No pregnancy Now under treatment for acid secretion

Case 3 —Miss F (No 1852) Operation Nov 12, 1902. Left ovary normal Right ovary enlarged by single cyst of Graafian follicle, punctured and lining pulled out, sutured with silk. Suspension and appendectomy Recently and repeatedly examined. Right ovary somewhat large and heavy, not tender thirteen months later Not seen again for six months, when right ovary was normal, and has so continued. Unmarried

Case 4 —Mrs W S P (No 2104) Referred by Dr Lovett. Operation Nov 4, 1903 Right ovary about three times normal size owing to single cyst of Graafian follicle Cyst excised and wound closed with silk. Left ovary, three superficial Graafian cysts, punctured and lining membrane pulled out Not sutured. Appendectomy Not seen for three years, but repeatedly reported as well in interval April 26, 1906 both ovaries slightly large, especially the right, not tender, no symptoms. Complained of sterility Cervical secretion normal, vaginal profuse, turbid, and acid. Under treatment for sterility

Case 5 —Mrs H. P (No 2249) Referred by Dr Benson Operation June 27, 1904 Left ovary size of a hen's egg multiple cysts Removed by excision, leaving small portion of ovary near hilum, sutured with silk. Right ovary the same condition and treatment Cysts of Morgagni removed from each tube. Suspension, appendectomy, trachelorrhaphy, perineorrhaphy Not seen since convalescence, but repeatedly examined and reported on by her physician, a good diagnostician. Ovaries have not enlarged. No pregnancy Operated on for peculiar sexual psychopathia, which has not improved

Case 6 —Mrs W A. (No 2201) Referred by Dr Mason Operation Feb 8, 1905 Left ovary, hemorrhagic cyst size of a normal ovary, resected, leaving ovary almost normal size. Right ovary, numerous small superficial Graafian cysts, punctured and lining removed. Neither tube thickened, both constricted and occluded in outer third, both resected. Recently and repeatedly examined. Ovaries have remained normal size No pregnancy

Case 7 —Miss M. T (No 2050) Referred by Dr Knowles Operation Sept 30, 1903 Right ovary, one cyst size of English walnut, excised and wound closed with silk. Left ovary normal Suspension Examined by Dr Knowles March 19 1906, who reports symptoms entirely relieved, no enlargement Unmarried

Case 8 —Mrs C S (No 2274) Referred by Dr Knowles Operation Feb 27, 1905 Both ovaries contained single thin walled cysts of the Graafian follicles of the size of small English walnuts. Both punctured, lining membranes pulled out and sutured with silk Fixation, trachelorrhaphy, cystocele and perineorrhaphy March 27, 1906, her physician, a good diagnostician, reports no symptoms, everything normal No pregnancy, widow

Case 9 —Mrs W G S (No 2311) Operation Jan 9, 1905 Right ovary one, left ovary two small superficial follicular cysts, punctured lining membranes removed, sutured with silk Two cysts of Morgagni removed, appendectomy, trachelorrhaphy and perineorrhaphy Recently and repeatedly examined Ovaries normal No pregnancy, but preventive measures employed

Case 10 —Miss F L D (No 2365) Referred by Dr Bush Operation Jan 30 1905 Left ovary, cyst size of normal ovary excised and sutured with silk Right ovary, one small superficial follicular cyst punctured, lining removed not sutured Cysts of Morgagni removed appendectomy March 20, 1906 reported by Dr Bush cured No ovarian enlargement Unmarried

Case 11 —Miss A F (No 2385) Operation March 17 1905 Left ovary three small follicular cysts punctured Right ovary, cyst of corpus luteum, excised and sutured. Suspension Slight thrombosis of left leg in convalescence. Repeatedly and recently examined. Normal Unmarried

Case 12 —Miss E. L B (No 2269) Operation Oct. 22, 1904 Right ovary, several small superficial cysts punctured and lining removed, silk suture Left ovary, cysts size of English walnut excised, wound sutured, about one-third of ovary left. Appendectomy Repeatedly and recently examined. Left ovary temporarily enlarged two months after operation, since normal Unmarried.

Case 13 —Miss L J R (No 2017) Referred by Dr J G Clark of Philadelphia. Operation May 29, 1903 Right ovary, one small deep cyst, ovary bisected, cyst removed with forceps ovary sutured with silk Left ovary, cystic throughout, removed Both tubes occluded at fimbriated extremity, dilated and probed Appendectomy Seen one year later Ovary normal. Has tuberculous sputum Unmarried.

Case 14 —Mrs H. H. B (No 2204) Operation March 31, 1904 Right ovary, multilocular cyst size of an orange, excised, ovary saved, wound closed with silk Smaller cyst of left ovary same treatment. Suspension Examined about a year later, ovaries normal No pregnancy Separated from husband.

Case 15 —Mrs H. B K. (No 2165) Referred by Dr Macdonald. Operation Feb 8, 1904 Right ovary, luteal cyst size of hazelnut, punctured, lining pulled out, silk suture Follicular cyst size of English walnut excised and sutured. Left ovary, small follicular cyst punctured and lining pulled out, no suture Myomectomy, suspension Four months later organs normal, and reported normal and no symptoms by her physician in March, 1906 No pregnancy

Case 16 —Miss J G (No 2163) Operated on Feb 4, 1904 Right ovary, dermoid, size of a lemon, removed Left ovary, cyst size of a pullet's egg, excised, ovary preserved and sutured with silk Appendectomy One year later, ovary normal Repeatedly and recently examined Remains normal Unmarried

Case 17 —Miss C S (No 2162) Referred by Dr Putnam Operation Jan. 13, 1904 Right ovary normal Left ovary, two Graafian cysts size of a filbert, excised and sutured. Appendectomy Repeatedly examined during following year Ovaries normal Has married and been pregnant.

Case 18 —Mrs G M. N (No 2143) Both ovaries enlarged, edematous and containing small cystic follicles, punctured, lining pulled out and sutured Right ovary large and apparently persistent corpus luteum, same treatment Suspension and appendectomy Repeatedly and recently examined ovaries normal No pregnancy, preventive measures

Case 19 —Mrs F W H (No 2010) Referred by Dr Houghton Operation Sept 26, 1903 Both ovaries, persistent corpora lutea about doubling size of ovaries both excised, in both luteal cells have degenerated but contents have persisted and are probably increasing Suspension and trachelorrhaphy Four months later left ovary somewhat enlarged but gradually decreased again to the normal under depletion No pregnancy

Case 20 —Miss M. L R. (No 1999) Referred by Dr Wormelle Operation April 27 1903 Left ovary normal Right, one cyst, punctured, membrane pulled out sutured Division of persistent iliolumbar ligament, suspension appendectomy One year later normal Recently reported no symptoms Married one week

Case 21 —Mrs F M W (No 1983) Referred by Dr Putnam Operation April 6, 1903 Right ovary three enlarged follicles punctured Left ovary luteal cyst size of walnut excised sutured Appendectomy and myomectomy Repeatedly examined during next eighteen months Ovaries normal Not since heard from

Case 22 —Mrs F G M (No 1980) Referred by Dr Torrey Operation March 30 1903 Right ovary normal Left one large and several small cysts punctured membranes extracted and sutured Suspension and appendectomy Ovaries recently reported normal Symptoms relieved Twins

Case 23 —Mrs O W (No 1955) Referred by Dr Wadsworth Operation March 14, 1903 Both ovaries enlarged by numerous small enlarged follicles, multiple punctures On left ovary one larger Graafian cyst lining removed and sutured

Suspension, appendectomy, perineorrhaphy Thrombosis of left leg in convalescence. Both ovaries somewhat swollen about two months after operation, gradually returned to normal Seen recently, well One pregnancy since operation

Case 24 —Miss M (No 1936) Referred by Dr Torrey Operation Feb 2, 1903 Right ovary, numerous small superficial Graafian cysts, lining membranes pulled out. Cyst of Morgagni removed Left ovary, luteal cyst, excised, about half an ovary left Appendectomy No further symptoms Seen recently Well Unmarried

Case 25 —Miss S M P (No 1933) Referred by Dr Flanders Operation March 31, 1903 Both ovaries contained numerous hemorrhagic Graafian follicles, all superficial, all punctured and membranes removed, stitched with deep silk sutures Appendectomy Seen recently and repeatedly At the end of six months both ovaries somewhat enlarged, right sensitive Under depletion gradual decrease in succeeding six months, now normal Symptoms much improved Still slight dysmenorrhea Unmarried

Case 26 —Miss M. K. O (No 1806) Patient of Dr J K Mitchell, of Philadelphia Operation Oct 31, 1902 Left ovary enlarged to double size by numerous deep small cysts, removed Right ovary normal size, but contained numerous small deep follicular cysts Multiple punctures, surface scarified Seen repeatedly and recently Ovary has remained normal size. Unmarried

Case 27 —Mrs F F H (No 1697) Referred by Dr Sabine Operation April 15, 1903 Right ovary, cyst size of orange, removed. Left ovary, hemorrhagic cyst size of American walnut, punctured, membrane extracted, not sutured Radical cure of hernia Dudley's operation Repeatedly examined. In succeeding six months ovary enlarged somewhat but again decreased. No pregnancy, 39 years old

Case 28 —Mrs M N M. (No 1677) Referred by Dr Putnam Operation June 11, 1903 Left ovary cystic throughout, removed Right ovary, three cysts punctured and membrane pulled out. Appendectomy and trachelorrhaphy Suppuration of abdominal wound in convalescence Repeatedly examined Ovaries remain normal. No pregnancy, 38 years old

Case 29 —Mrs C A. H. (No 992) Operation March 30, 1904. Right ovary, enlarged by several small superficial follicles, punctured Left ovary, cyst size of an egg, punctured, membrane pulled out, silk suture Suspension, appendectomy, trachelorrhaphy Seen recently Normal, entirely well No pregnancy Preventive measures

THE PRESENT STATUS OF CONSERVATISM IN THE SURGICAL TREATMENT OF TUBES AND OVARIES *

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We all know that even the least of the atoms has its definite value and its purpose to fulfill in the harmonious whole of Nature's plan We have been long taught when a limb was injured, a hand mangled or an abscess formed to make every effort to save the part Until rather recent years these saving methods did not seem to apply to the pelvic organs of women at all

SURGICAL TREATMENT OF OVARIES

In view of the fact that pelvic lesions constitute a large percentage of every surgeon's cases, their treatment becomes a matter of momentous importance The recognition of the value of the internal secretions or trophic influences of the ovaries has had a world-wide influence as regards the surgical treatment of these organs

The elder Emmet expressed the hope that future generations might be allowed to go uncastrated More than twenty years ago Schroder first advocated the preservation of the remnant of normal ovarian tissue that could be left in the removal of cysts About that time August Martin reported a number of cases in which he had removed degenerated portions of the tube and ovary and saved the normal tissues A few years later William M Polk presented to the surgical profession his brilliant results, and then considerable attention was paid to the subject in this country von Winkel, Hofmeier, Schatz, Zweifel, P Muller and A Palmer Dudley were all pioneers in this work Considerable harm has at times been done by overenthusiastic followers of these men, the student often lacking the judgment of the teacher

Lawson Tait was a most distinguished exponent of scientific hara-kiri At present, were he living, he would no doubt be unpopular with most French statesmen and with our own President Roosevelt Battey in America, Tait in England and Hegar in Germany set the pace for the wholesale removal of ovaries in three of the world's greatest countries

In an address before the American Medical Association, the late A Palmer Dudley said "A quarter of a century ago he who would have advocated conservative surgery on the uterine appendages of woman would have been considered by the surgical profession at large as a fit subject for the asylum" A review of gynecologic events occurring during these last twenty-five years presents a wonderful panorama of wide sweep We have had many stars in this often tragic drama of the surgical arena Many of the makers of gynecology could see no avenue to success but that made by the radical reremoval of all that lay in their path

It is unusual for the genital organs of the male to be sacrificed for any condition save malignant disease In inflammatory disease of the testicle or vas deferens removal, as a rule, is about the last thing thought of The repressed sex are entitled to some privileges as well It is distinctly of no advantage to the woman to exchange one undesirable condition for another The belief in the mind of the woman that she has lost the generative function, that she has lost some of the finer sensibilities of the sex, that she is unlike other women, is in itself to most women productive of much mental anguish

VIEWS OF A NUMBER OF AMERICAN GYNECOLOGISTS

Believing that a general consensus of opinion is of value in the discussion of mooted questions, I addressed circular letters of inquiry to thirty-five of the leading operators of this country and received extended replies from thirty-three of them I inquired of each operator as to his favorite and usual method of treating diseased tubes, cystic and prolapsed ovaries, whether or not he had done ovarian transplantation and about what, if any, percentage of pregnancies had followed conservative work in his hands Replies were received from Drs H C Coe, New York City, Floyd McRae, Atlanta, Ga , J Taber Johnson, Washington, D C , Edward J Ill, Newark, N J , Charles R Robins, Richmond, Va , J G Earnest, Atlanta, Ga , William M Polk, New York City, Joseph Brettauer, New York City, Edward McGuire, Richmond, Va , William H Humiston, Cleveland, Ohio, S C Gordon, Portland, Me , Charles G Cumston Boston, A Brothers, New York City, A Vanderveer, Albany, N Y , Robert T Morris, New York City, W H Baker Boston, Charles Jewett, Brooklyn, N Y H J Boldt, New York City I S

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* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association at the Fifty seventh Annual Session June 1906

Stone, Washington, D C , Chauncy D Palmer, Cincinnati, Ohio, S Marx, New York City, A Lapthorn Smith, Montreal, Canada, J H Carstens, Detroit, Mich , Joseph Price, Philadelphia, Randolph Winslow, Baltimore, Miles F Porter, Fort Wayne, Ind , W P Manton, Detroit, Mich , J Shelton Horsley, Richmond, Va , John B Deaver, Philadelphia, Pa , H A Kelly, Baltimore, E C Dudley, Chicago, W E Ashton, Philadelphia, and Henry T Williams, Rochester, N Y

Most of the answers were replete with interest and suggestions Drs Coe, Williams, Ashton, Manton, Stone, Jewett, Morris, Brothers, Polk, Ill, and McRae slit open occluded tubes, do plastic work and otherwise attempt to restore in a measure normal physiologic conditions Deaver practices the above methods in a very limited number of cases Carstens is extremely conservative in dealing with cases under 35 years of age, very radical with those above that age Boldt rarely resorts to conservative work on the tube Vanderveer nearly always does radical work Brettauer does radical work except in a few cases of hydrosalpinx Gordon nearly always does radical work Earnest favors conservative operations occasionally Kelly, under rare condition when the patient is very desirous of having children, resorts to plastic surgery Robins only does this sort of work when called to operate in cases of sterility All of the other authorities mentioned expressed themselves as in favor of radical work in all cases of tubal disease Most of them believe either in nowise disturbing a tube or in removal in its entirety With the exception of Marx, who thinks entire removal for the prevention of recurrences the best procedure, these men puncture cystic ovaries with knife or thermocautery Most of them scrape out the lining and close the cyst cavity by sutures if of much size Several practice resection of portions of the ovary for this condition Practically all ovaries contain small cysts Craig and others have called attention to a distinction between true cysts of the ovary and distended Graafian follicles which often attain a diameter of 2 cm before rupturing Occasionally a secondary operation will be necessary by reason of the rapid recurrence of cysts

Deaver considers ovarian prolapse rare except when associated with malpositions of the uterus He corrected it by securing the uterus in proper position E C Dudley suspends the ovary by doing plastic work on the broad and ovarian ligaments Most gynecologists who have expressed an opinion on this subject say that the ovaries should be stitched to the broad ligament. Earnest makes a slit through the broad ligament, passes the ovary through this and secures it, as it were, on a shelf by the use of one or two sutures Marx believes most cases of ovarian prolapse are due to varicocele of the broad ligament Humiston attaches the ligament higher up on the uterus Edward McGuire fastens the ovarian ligament to the abdominal wall at times

But few have had any experience whatever in ovarian transplantation Boldt and Brothers occasionally transplant the ovary to the uterine cornu after the removal of an impermeable tube Morris has had an extended and interesting experience both experimental and clinical in this sort of work By his experiments on rabbits he has shown that after transplantation the host of the borrowed ovary may become pregnant that the tissues of one animal are not kindly disposed to those of another that the transplanted ovary in heteroplastic grafting degenerates in a few weeks or months He has in several cases succeeded in ameliorating or preventing the distressing symptoms of the artificial menopause by this means Morris, I understand, has been working on a serum with which he hopes to overcome in a given case that destructive tendency for the tissues of another He has been successful in homoplastic grafting, but not so in heteroplastic procedures According to recent reports, a patient of his became pregnant and was delivered of a normal baby after her own ovaries had been removed and one from another woman substituted

The estimates of the percentages of pregnancy after conservative work on tube and ovary are all small, somewhere in the neighborhood of 1 per cent Many operators report no cases of pregnancy whatever after plastic work on the tube A great many pregnancies have followed conservative work on the ovaries The percentages given by different operators vary from 5 to 10 per cent Marx has had conception follow the leaving of minute portions of ovarian tissue McGuire reports pregnancy following the complete removal of one tube and ovary, the removal of three-fourths of the other ovary and the outer third of the remaining tube Many of these men strongly favor palliative treatment before an operation is ultimately decided on All, of course, are radical in the removal of pus tubes There is considerable variance in the minds of operators as regards what constitutes conservatism Many do without any operation whenever possible, and when they do operate make a clean sweep, holding that to be a truer conservation than an operation which carries with it the possible risk of a second resort to surgical relief

CONSERVATIVE OR RADICAL WORK?

In the surgical treatment of diseased conditions of tubes I would deem it advisable to do plastic work provided the inflammatory process had been rather remote and the damage done to the tube was comparatively slight, that there were no evidences of tuberculosis or malignant disease, that the woman had at least a few years' grace before the menopause was due, that some healthy ovarian tissue could be left and that there were no positive contraindications to a future pregnancy There is often in these cases a possibility of the restoration of function, the woman may become pregnant and the possibilities of future trouble from the tube are rather remote in properly selected cases Conservative operations for the ovary are indicated when the woman has not passed the menopause, when the ovary is neither the seat of malignant disease (including tuberculosis) nor of pus infection, when the ovary is cystic, and when it is intended to free the ovary from adhesions

The conviction on the part of most physiologists and gynecologists is that the ovary has another function aside from that of ovulation, the production of an internal secretion which passes into the circulation and assists in maintaining the physiologic balance of the body or the distribution of trophic influences having the same effect The knowledge on the part of the woman that she is forever sterile will in some cases give rise to mental disturbances and even melancholia

The chief indications for the radical removal of tubes are the presence of tuberculosis, malignant disease acute inflammations and pus

The disadvantages of tubal repair work are the unlikelihood of a return of normal function (this takes place occasionally) and the risk after an unilateral operation of a recurrence in the opposite tube If the interior of the uterus is properly treated this danger is slight As to the chances of [illegible] gestation [illegible] has not been reported H A Kelly states that the cilia are rarely destroyed by acute inflammation and never by catarrhal trouble The dangers of infection following the opening of a tube which contains no pus are exceedingly slight. The mortality in carefully conducted laparotomies of election is so low that the danger from a secondary operation *per se* may be said to be almost *nil*

One of the principal reasons urged against conservative methods in dealing with cystic ovaries is the fact that cysts often soon re-form It is believed by many that a small cystic ovary is much better than no ovary at all By resection of a large part of the ovary the principal cyst-bearing portion may be removed. The presence of tuberculosis, of malignant disease, or of pus infection is generally considered to be an absolute indication for complete removal I have removed an ovarian abscess 2 cm. in diameter along with one-half of the ovary containing it and had no bad result

TECHNIC OF PLASTIC REPAIR WORK.

Perhaps no part of the body has greater powers of regeneration than the tube Both normal tubes may be ligated near the uterine end with silk, and pregnancy may occur a few months later In the doing of plastic work on the tube there are opportunities for the exercise of much surgical judgment and common sense There must be a recognition to a nicety of the tube that must be removed and the one that may be saved The club-ended tube can be slit open, the agglutinated and adherent fimbriæ teased out to their normal position or the mucosa may be attached to the peritoneal coat by means of fine catgut sutures All adhesions binding the tube in unnatural positions should be broken up and the denuded surfaces covered with peritoneum Some suture the amputated or opened end of the tube to the ovary, others fix a portion of the ovary inside the lumen of the tube, spread out the mucosa over as much ovarian tissue as possible and secure it by suturing In simple stricture or obliteration of the isthmus some one has suggested resection of the affected part, followed by anastomosis of the ampulla to the cornual portion of the canal The lumen of the tube may be kept open during the healing process by a cord of braided silk passing through it, one end attached to the ovary, the other after passing through uterine cornu and uterus being fastened to a bobbin placed in the vagina

In opening contracted tubes the use of saline solution and a small syringe is deemed more safe and satisfactory than a probe. It is sometimes even possible for regeneration to take place in a pus tube after it has been drained vaginally

The hard, cirrhotic and painful ovary having a tough thickened capsule may at times be benefited by the excision of a strip of the dense capsule These cases are usually unsatisfactory to treat and after entire removal pain often reappears in the region of the cicatrix

Ovarian adhesions, if present, should be broken up and raw areas given attention Cysts should be opened and their lining membrane peeled out This can often be done with tissue forceps and the walls of the sac approximated by fine catgut sutures A small round needle having no cutting edge should be used in order to prevent unnecessary oozing of blood When the ovary has the appearance of being badly damaged one can locate and preserve the healthy tissue best by splitting the organ open opening superficial and deep cysts and removing unsound tissue with scissors By removing with curved scissors an ellipse from the covering of a superficial cyst the edges can be neatly approximated In the removal of large ovarian cysts in which pressure effects have destroyed most of the ovary, a small layer of thinned ovarian tissue can often be preserved at the base of the cyst and sutured into a sausage-shaped roll

I have practiced conservative work in over fifty cases of ovarian or tubal disease, and so far as I have been able to follow my cases symptomatic results have been good There has been no recurrence of tubal trouble, a very small number of cases of cystic ovaries has come to second operation for the removal of recurring cysts Several pregnancies have followed resections of portions of the ovaries, but I have no record of a case of pregnancy following plastic work on tubes

Ovarian prolapse is frequently associated with retroposition or other malpositions of the uterus, and hence can often be corrected by restoring the uterus to its normal position, this I often do by a modification of the Andrews operation Otherwise I suspend the ovary either by shortening its ligament or by making a slit in the broad ligament near its top, passing the ovary through this and securing it on top of this shelf by a catgut suture on either side During or after attacks of acute salpingitis the ovaries often become bound down in an unnatural position behind the uterus On being freed from adhesions they may be saved in part by resections if not entirely disorganized

The sudden bringing about of the menopause by operations that should be relegated to the back seat of necessity, may bring on a sudden change in the sexual feelings especially distasteful to the woman The feeling that she may lose some of those delicate essentials of womanhood so peculiarly inherent in the sex often prevents a woman from submitting to much needed surgical treatment Richter and others have concluded that castration in either the male or female is followed by a marked decrease in the gas interchange The consumption of oxygen is lessened and the body takes on fat Halban and many others have observed that the ovaries or testicles, as the case may be, are necessary to the development of the genitalia and that not only is their development arrested by castration, but that atrophy even occurs This sudden bringing on of the climacteric being so at variance with the natural order of things endows the woman with obesity, hot flashes, chilly sensations, nerve storms, neurasthenia, hysteria, insomnia and other varying manifestations of a disturbed physiologic equilibrium Often one variety of suffering is but exchanged for another and the last state of the patient is worse than the first An operation neurasthenia sometimes develops that renders these cases most pitiable to the observer The victim walks with difficulty from weakness and pain She may have depression of spirits, vertigo, insomnia, disagreeable dreams, depression of spirits, a feeling of pressure on the head and crying attacks

CONCLUSION

I believe that, barring the presence of the menopause inflammation pus tuberculosis and malignant disease conservative work should be done, that every organ or part of an organ consistent with the health and well-being of the patient should remain undisturbed, that in these cases there is much room for exercise of good judgment and due discrimination, that the risks of infection and of secondary operation from portions left behind are rather remote in properly selected cases

To summarize, I would say that the majority of the gynecologists interrogated favor a restricted conservatism, that the number of pregnancies occurring after tubal operations is very small, that the results after plastic work on the ovaries is better, that age, the presence of pus, tuberculosis and malignant disease indicate, as a rule, radical work, that prolapsed ovaries, generally speaking, should be elevated in the pelvis by suspension operations on the uterus, by shortening the ovarian ligament or by placing the ovary in front and on top of the broad ligament, that the functions of the tube and ovary should be preserved whenever consistent with health, that the artificial induction of the menopause brings a very serious disturbance into the life of the patient, and that ovarian transplantation experimentally and clinically has, in a limited field, been productive of satisfactory results

DISCUSSION

ON PAPERS BY DRS. REYNOLDS AND CANNADAY

Dr. W. M. Polk, New York City, said that the situation resolves itself into the question How far may we go in preserving ovaries which are found to be diseased on being exposed *in the course of a laparotomy? This is one of the most* difficult questions before the profession to-day Surgeons have not been able to say at the operating table whether or not an ovary belongs to that class which will reproduce a morbid growth that will embarrass the patient in the future. We must be able to determine this by the gross appearances The descriptions in text books of ovaries which are likely to cause pathologic conditions are misleading, he said. All follicular cysts are not apt to produce subsequent trouble, but the larger ones may The question that faces us in the end is that of a secondary operation. As this is not a matter of life and death, but rather of health, it is our duty to lay the subject before the patient. If she prefers to retain menstrual function we are justified, he said, in ignoring the possibility of a subsequent pathologic condition. This is perfectly safe ground on which to stand. We must turn to pathologists and beg them to devise some method by which we can settle the question definitely at the operating table. The question of conservatism so far as the ovary is concerned, is in a far better way of solution than that which pertains to the oviduct. This is a crucial point. The virulence of an inflammatory process will determine whether there will be resolving salpingitis or one that will leave no hope of the tube ever performing its full function again for while menstruation may be retained, the woman's reproducing function will be nil When it comes to how much of an operation can be done to restore the Fallopian tubes the question turns on the condition of the operative field. If we can secure freedom from septic infection in this operation and secure a clear field which will leave the tubes in the condition in which they are placed, Dr. Polk believes the operation will be successful, but just as sure as conditions remain which invite an adhesive inflammation and closure of the opening the work will be for naught. One, two, or a dozen cases do not always make the rule but Dr. Polk feels that while there is a great deal to be done, the field is still one of the most promising that stands out before us, and he laid especial stress on experimentation with a view of testing the possibility of subsequent pregnancy in these cases

Dr. R. T. Morris, New York, said that in [illegible] and [illegible] cases he formerly tried to save little except the patient's [illegible], then he began to save a little ovarian tissue to retain the value of internal secretion, and it seems to him now that general surgeons may, with advantage, do some conservative work. When we have malignant disease we must not be guided by the patient's wish. There we must dominate. If there is a question of doubt one can make a quick diagnosis by frozen section. In cases of tuberculosis one can not do much conservative work. In cases of mixed infection we have our greatest field for conservative work. In the gonorrheal cases there is great opportunity for much conservative surgical work. There is certainly more pleasure in doing good work of this kind than in destroying or removing. Dr. Morris said that he [illegible] that grafting has but a limited field. He has gradually narrowed the field down to homoplastic grafting Surgeons did heteroplasty and did not get much result from it, because one woman is intolerant to the tissues of another, but there are degrees of tolerance that may sometimes amount to complete tolerance. He said that he reported one case in which there was subsequent heteroplastic pregnancy and the child is living Very many interesting questions arise, as for instance, who is the mother? Kelly says the mother is the one who gave the nutrition during the life *in utero*, and Clark says the ovary is the mother This ought to be decided, as legally important questions may be involved. In conservative surgery, when a woman has lost her ovaries without possible chance of child bearing, can we graft? There is a possibility, Dr Morris said, that this one pregnancy can be repeated, but until tolerance can be established between the tissues of individuals heteroplastic ovarian grafting can not be done very successfully

Dr. F F Lawrence, Columbus, Ohio, declared that his experience in efforts at conservatism has been far from pleasing One of the most distressing cases was one in which he made a resection of one ovary and one part of one tube. This woman was the mother of a child between 3 and 4 years of age, her husband in broken health. About seven months later he was called to see the woman, and found her dying as the result of a ruptured extrauterine pregnancy He does not know whether his efforts at conservatism were responsible for that death or not, but, for several hours thereafter, and many times since, he has thought that had he done more radical work the woman would still be living In three other cases it had been his misfortune to have to operate a second time for extrauterine pregnancy, in cases in which he had left one tube and ovary We know that Nature will sometimes perform wonders in the way of repair, and yet if an ovary is sufficiently inflamed to become adherent, or if the destruction has been sufficient to produce sclerosis, what, he asked, can be accomplished by a resection. If, as many believe, all these inflammatory conditions are the result of infection, do we remove the cause of the suffering when we remove a part only of the ovary or tube which has been infected? Dr Lawrence said that he believes in conservatism as much as any one can, but only in that conservatism which serves the future good of the patient—that conservatism which relieves not only the present suffering but subserves the entire interests, comfort, and health of the patient in the future. Another unfortunate sequel was in a case in which he made a resection of part of a small adherent ovary and tube. Some years previously this woman had been operated on by another surgeon who removed an ovarian tumor She consulted Dr Lawrence a short time after with the lower abdomen filled with papillomatous matter, for which he could do nothing The question of separating adherent and infected Fallopian tubes seems to him to be almost, if not quite, parallel with the idea of separating the adhesions about the inflamed appendix and leaving the appendix. If this be not good surgery in inflammation of the appendix why is it good surgery of the Fallopian tubes?

Dr. Seth Gordon, Portland, Me., said that he is glad to know that Dr Morris feels that he has finally gotten a pregnancy from heteroplastic work. Dr Gordon has had one case of pregnancy occur two years after he did his best to remove the ovaries and tubes He supposed that he had removed everything. Another patient was operated on by Dr Chadwick and Dr Gordon delivered her a year after she was operated on. There is not so much question as to who is the mother of the child in Dr Morris' case. Dr Gordon believes in the conservatism that does good to the patient. A great deal of good has been done in conservative surgery as well as much harm. There was harm in the [illegible] was called normal ovariotomy, and there was a great deal more good in removing ovaries and tubes at that time. Dr Gordon thinks the question raised by Dr Morris is pertinent [illegible] to study great [illegible] He [illegible] conservative [illegible] streptococcus or gonococcal infection [illegible] radical surgery [illegible] has done a great deal [illegible] done good [illegible] to [illegible] infection and [illegible] attempt to do any [illegible] servative surgery in this class of cases would also be criminal surgery Palmer Dudley reported 1,200 cases of conservative surgery Dr Gordon declared that he knows Dr Dudley reported them honestly, but before he died Dr Dudley said he should have done hysterectomy in a great many of them He said most of his work was experimental While he had 20 or 30 pregnancies following, he still thought he had made mistakes in not doing hysterectomy more Spencer Wells said that in a thousand cases he had had to do secondary operation fifty times

Dr M O Pantzer, Indianapolis, called attention to a successful effort at conservatism in a case in which the pathology was of a kind generally conceded to include no promise. The case was reported in detail to this Section in 1903, and appeared in The Journal of the American Medical Association, Nov 7, 1903 The heavily sclerotic, though not shrunken nor enlarged ovaries as found at the operation, afforded little incentive to a conservative effort Rather this was supplied by the ardent desires of the couple to have offspring One ovary was removed entirely The other was pared of its thickened covering, leaving behind a small raw pyramidal portion Menstruation, which had been retarded, now became regular, though still attended with much pain The patient conceived five months after operation and went to full term The unbounded happiness produced by the birth of a nine pound boy came to full expression in a letter written to Dr Pantzer by the mother

Dr W E Dorsett, St Louis, said that in retroversion and retroflexion there are cysts and painful ovaries that can be remedied by resection, and for the last four years he has been resecting the ovaries without any bad symptoms These women go on menstruating without pain In most of these cases an ovary is found that is not normal because it is cystic, and Dr Dorsett slits it down to the hilus, scrapes out the cysts, and closes the incision, and the patient goes on menstruating without trouble.

Dr H J Boldt, New York, said that the proper procedure is to exsect the tube and graft the ovary in the cornu of the uterus Sometimes conditions are present where it is possible for us to preserve parts in young women and we should always do it. Dr Boldt agreed with those who say that conservative surgery is fraught with danger

Dr E Reynolds Boston, said that his experience and judgment in the resection of infected tubes is as much against it as it is in favor of conservative surgery in neoplasms of the ovary or tubes That is also the consensus of this discussion He agrees wholly with Dr Polk that in this question of conservatism of the ovaries or tubes, it is the patient's life and health with which we are dealing, and her decision should be paramount, also, that we should not be opening the abdomen all the time for little cystic conditions in the ovaries There is a great field for the conservation of tissue in large cysts He said that Dr Morris has furnished us with a question rather than a conclusion Dr Reynolds thinks that Dr Gordon's comment that the occurrence of pregnancy after both ovaries had been removed was due to failure to remove the ovaries entire, deserved more weight a few years ago than it does now but the possibility of leaving a portion of the ovary the possibility of the existence of third ovaries is certainly still sufficient to require more cases than this of Dr Morris' before we can assent to his conclusion In the meantime it should remain an open question

Dr J I Cannaday, Hansford, W Va, said that Kelly, after extensive experimentation has shown conclusively to his own mind at least that inflammation of the tube very seldom destroys the cilia Dr Cannaday thinks that most gynecologists will agree that results can be accomplished by other means than hysterectomy in the treatment of endometritis He also thinks that the woman should always be consulted prior to operation as to what she would prefer

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Institute for Chemical Research—A scientific institute for the discovery and investigation of new chemical remedies has recently been opened in Frankfurt a M, owing to the generosity of the late G Geyer and his widow

RELATION BETWEEN APPENDICITIS AND GALLSTONES

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Previous to about three years ago I attributed to postoperative and preoperative adhesions the abdominal pains, distension and constipation that sometimes remained after I had removed gallstones from a patient Since I have been removing the appendix during operations for bile-passage diseases, adhesions have given me little trouble

During the latter part of June, 1903, three patients from whom others had removed gallstones came to me complaining of pain in the abdomen, abdominal distension and constipation Two of these patients gave definite histories of acute attacks of appendicitis occurring early in life, the third gave a history of longstanding "stomach trouble" before the biliary colics began, in all of them there was marked tenderness over the appendix areas These three patients were operated on for appendicitis Marked changes were found in the removed appendices and the abdominal symptoms disappeared These cases suggested to me that perhaps I had made mistakes in treating some of my gallstone patients I, therefore, communicated with all of them whom I could find, and found two were frank enough to admit that, although their gallstones had been removed, they were not well These patients gave definite histories plainly suggesting the existence of chronic appendicitis long before the biliary colics had occurred In both cases there was decided tenderness over the appendix The appendices were removed They showed marked and long-standing inflammatory changes The abdominal symptoms disappeared

From July 15, 1903, to July 1, 1906, I operated on 48 patients with gallstones and 7 patients who had appendicitis and cholecystitis without gallstones In these 7 cases I was of the opinion that the cholecystitis was secondary to the appendicitis In 2 of the 48 gallstone operations acute infection was presnt, and the appendices were not examined during the operations One of these patients completely recovered, the other complains of abdominal symptoms and has tenderness over the appendix He says that, while he suffers some, he is "not sick enough to have another operation" In the remaining 46 gallstone operations, the appendix was removed in each case Five patients gave a definite history of having had typhoid fever, 3 of these had normal appendices, 2 had chronic appendicitis with no peri-appendicular changes Two patients had gastric ulcers associated with gallstones, in one of these chronic appendicitis, with peri-appendicular changes, was present, in the other the appendix was normal Thirty-nine of the 46 patients had appendicitis with gallstones, but with no history or evidence of typhoid or of gastric or duodenal ulcer Twelve of the 39 cases of gallstones with appendicitis showed peri-appendicular changes Pus was found in the appendix in four instances

In 46 operations, removing gallstones and the appendix, the appendix was found diseased 42 times and normal 4 times In 3 of the 4 normal cases the patients had had typhoid, and the other gallstone patient with a normal appendix had a gastric ulcer Thirty-four of these 42 cases of gallstones and appendicitis gave histories plainly suggesting the existence of appendicitis ten or twelve years previous to the occurrence of biliary colic. In 6 of these 34 cases a definite history of an acute attack of appendicitis was obtained; in 28 no history of an acute attack was given.

If it is true that the common method of infection locating in the bile passages is through the portal vein and that gallstones are only a stage in infection of the bile passages, there would seem to be a very definite etiologic relationship between gallstones and certain infections involving the intestinal tract or any part of the anatomy drained by radicals of the portal vein. We have believed for a long time that typhoid fever is responsible for some of the cases of bile-passage infection gallstones, but we have seemed to ignore the factor of appendicitis in causing bile-passage disease. It seems to me that the appendix and ileum are similar in their relation to the portal system. Both harbor the colon bacillus and both drain into the portal vein. If disease in the ileum-typhoid is associated with the entrance of colon bacilli into the portal vein, and these are excreted, as it were, by the liver into the bile passages, why can not disease of the appendix, which is more common than typhoid, result in bile-passage infection? It seems very probable to me that appendicitis, especially the long-standing varieties, is the cause of many bile-passage infections.

CLINICAL OBSERVATIONS

Although from personal knowledge of the work of various surgeons, it seems probable that many recognize the association of gallstones with appendicitis, little has been written on this subject. Ochsner[1] reports 18 cases of gallstones in which the appendix was found diseased six times. In these cases the appendix changes were marked. Peri-appendicular changes were present in all these cases and pus was found in some of them. Moynihan states that he has often seen gallstones and appendicitis in the same patient, and suggests that the destructive lesions in the appendix may allow an infection of the portal blood.

Infection the Underlying Cause of Bile-Passage Disease.—It is generally agreed that cholelithiasis is only one manifestation of disease of the biliary passages and that infection is the underlying cause of bile-passage disease. The early work of Mignot and of Gilbert and Fournier has shown this conclusively, while in 1903 C. A. Ewald, before the Congress of American Physicians, showed that gallstones mean infection. It has also been shown experimentally by Mignot[2] that it is the mild and long-standing inflammations of the bile passages that especially predispose to stone formation, and that, experimentally at least, attenuated micro-organisms and mild inflammations are more efficient in producing gallstones than are virulent bacteria and acute inflammatory processes. It is also generally agreed that contamination of the bile is necessary for the occurrence of inflammation of the bile passages, and that the liver, by its bacteria-destroying powers, is a most important factor in preventing serious infections in the biliary apparatus. On account of the bactericidal properties of the liver, a limited number of infective bacteria of a low degree of virulence may be killed (Welch, Adami and others), or virulent infective organisms carried to the liver in large numbers may have their vitality much lowered and in being excreted through the bile passages may produce a mild inflammation instead of an acute and serious one. Knowledge of the condition of the bile in health is not a necessity in arriving at the cause of bile-passage infections. Herter says that during health the bile is sterile. However this may be, there is no question that in certain diseases and under certain conditions the bile is contaminated, and that this infected bile is responsible for bile-passage infections and, therefore, for the occurrence of gallstones.

How Does the Bile Become Infected?—If infected bile is essential to bile-passage infections, the micro-organisms must reach the bile through the blood or by ascending the common duct. So far as I know, there is no good reason to believe that the lymphatic system plays an important part in directly causing bacteria to reach the bile.

From the work of Sherrington, who, in 1898, showed that bacteria do not ascend the common duct unless stagnation of bile is present, and from observing the fact that many times the bacteria causing a cholecystitis are not the same as those found in the duodenum, it seems probable that ascending infection is not common in producing bile-passage infections. At present the trend of opinion favors the hematogenous origin of bile-passage diseases. Experimentally we know that this mode of infection is possible; clinically it seems probable. While it has been shown that bacteria circulating in the general venous and arterial currents are sometimes excreted in the bile, it seems that bacteria in the portal blood are more likely to be found in the bile and, for this reason, infections draining into the portal system may supply all the necessary conditions for bile-passage infections. Lortigan advocated this theory in 1902. In favor of the theory that infection of the biliary apparatus most often takes place by way of the portal vein is the occurrence of infected bile after ligation of the common duct, or even after tying one of the large bile ducts[3] and the common contamination of the bile in typhoid fever.

Diseases that Infect the Portal Blood.—If, as it would seem, it is true that bile-passage infections are caused by bacteria brought to the liver by way of the portal vein, the underlying cause of biliary infections would most probably be inflammatory or ulcerative processes localized in anatomic structures drained by the portal system. While it is claimed by Adami and Ford that during health bacteria are constantly finding their way from the intestines to the liver through the portal blood, it is probable that in most instances a diseased condition draining into the portal system is necessary to result in the production of definite bile-passage inflammation. It is generally admitted that portal blood and bile-passage infection occur very commonly during typhoid fever, and, while typhoid is not a very common disease, it is held responsible for a considerable number of the chronic infections of the biliary passages. If typhoid can be the underlying cause of bile-passage infections, why can not gastrointestinal ulcerations, intestinal tuberculosis, dysentery and chronic appendicitis afford a means for colon bacilli to enter the portal blood and to produce infection of the biliary apparatus? The recent work of Turck on gastric and duodenal ulcerations strengthens rather than contradicts the possible relationship between gastrointestinal ulcerations and gallstones. But of all these inflammatory and ulcerative conditions, chronic appendicitis is by far the most common, and it does not seem unreasonable to hold that a long-standing inflammation in the appendix may permit sufficient infection of the portal blood to cause bile-passage inflammation

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[1] Ochsner: Pennsylvania Med. Jour., Oct. 6, 1900.

[2] Mignot: Brit. Med. Jour., 1898.

[3] Homer: Centrbl. f. Path., vol. v, p. 825.

Chronic Appendicitis the Cause of Gallstones—The frequency of the coexistence of chronic appendicitis and gallstones in itself suggests the possibility of a relationship between them But if chronic appendicitis can cause gallstones, why do some patients who have chronic appendicitis have no gallstones? The power of the liver to destroy bacteria (Welch) would seem to offer the explanation If the bacteria from an appendicitis brought to the liver by the portal blood were destroyed by the liver, no bile-passage infection would occur from this source, but if the liver, owing to its inefficiency, or on account of the number and virulence of the bacteria brought to it, could not destroy them, but turned them into the bile stream, perhaps with their degree of virulence diminished, bile-passage inflammation might occur Mechanical conditions favoring the stagnation of bile would also influence the occurrence of bile-passage infection under such circumstances Acute appendicitis is less likely to cause disease of the biliary apparatus because the patient is apt to die or the appendicitis to be terminated by operation Furthermore, as stated in the foregoing, it is not the acute and virulent inflammation, but long-standing and mild catarrh of the bile passages that predisposes to stone formation Chronic appendicitis is a common affection, and by chronic appendicitis it is not necessarily meant that peri-appendicular changes must be present or acute attacks complained of A chronic inflammation in an appendix with an apparently normal peritoneal covering may be sufficiently severe to be recognized as a definite disease and may produce symptoms sufficiently annoying to warrant removal of the appendix Deaver's dictum, "The expression, chronic appendicitis, has but little meaning," can no longer be accepted

It was shown several years ago by Stengel and others that in cases of appendicitis in which the peritoneum of the appendix is normal, bacteria are found in all of the structures of the appendix except its peritoneal covering It would seem from these observations that in chronic appendicitis bacteria could find their way into the radicals of the portal vein. The anatomy of the appendix is not unfavorable to portal blood infection The presence of the abundant plexus of veins beneath the epithelium lining of the appendix and the abundant anastomosis between the portal vein radicals that drain the appendix afford all that is necessary for an endo-appendicitis to produce infection of the portal blood It has been shown that the occurrence of thrombosis is not necessary for germs to pass from the appendix to the liver by way of the portal system It is probable that the lymphatics do not transmit bacteria from the appendix to the bile passages Loison makes the statement that the lymphatics of the appendix do not communicate with the liver in any way

Although it is readily appreciable that the foregoing does not show that appendicitis is or is not definitely associated with bile-passage infections, and while it may be impossible to prove that appendicitis does or does not cause these diseases it is probable, theoretically and clinically, that appendicitis may at times be the underlying cause of infections of the bile passages and, of course, of one of the manifestations of these diseases—gallstones

PRACTICAL CONCLUSIONS

Regardless of the absence of proof of the existence of a definite relationship between appendicitis and infections of the bile passages, disease of the appendix should be kept in mind in performing every gallstone operation The appendix should be inspected when possible and should by no means be considered normal on account of the absence of peri-appendicular changes Unless my experience, with the limited number of cases mentioned in this article, has been exceptional, those who operate for the removal of gallstones and, as a rule, remove the appendix in doing these operations will be impressed with the frequency of the coexistence of these diseases and if the combined operation is more frequently performed the results of surgery for the relief of bile-passage diseases will be more satisfactory

405 Altman Building

INFLUENCE OF INTRAPERITONEAL INJECTION OF WARM STERILE NORMAL SALINE SOLUTION IN INTRAPERITONEAL HEMORRHAGE *

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I HISTORY

That all cases of intraperitoneal hemorrhage can be positively diagnosticated within a few minutes, in a safe and simple manner, and just as effectively as by an exploratory operation, has been demonstrated by H S Hollenbeck

Working under the direction of Professor Hall in the Department of Physiology of the Northwestern University Medical School, in a series of experiments on dogs, Hollenbeck produced intra-abdominal hemorrhage by various methods, and with a specially constructed trocar determined its presence within two or three minutes, without injury to the intestine or its peritoneal covering The trocar was passed carefully into the peritoneal cavity, the perforator was withdrawn and a hypodermic syringe was attached to the canula When the blood was in a fluid condition it was easily aspirated and the diagnosis made, but when clotted a preliminary injection of water was necessary In the presence of hemorrhage the water become blood tinged, while in the absence of hemorrhage the water remained clear

Of late years the subject of normal saline injections in cases of hemorrhage and shock has been enthusiastically studied and discussed That they are of the greatest value is now universally admitted As a rule the solution is injected either directly into a vein, into the rectum, or subcutaneously into the lymph spaces, especially under the mammary gland But the peritoneum, especially that covering the diaphragm, has great absorbing power Allaway[1] reports a case of heart failure following removal of an abdominal tumor in which the injection of normal saline solution into the peritoneum was followed by immediate resuscitation Hare[2] states that abdominal transfusions have been successfully performed and that such a procedure is a good one on account of the large absorbing surface exposed Byron Robinson,[3] who has studied the peritoneum extensively, says "With the recognized rapidity of peritoneal absorption, extensive and dangerous hemorrhage peritoneal injections might save life

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* Read in the Section on Pathology and Physiology of the American Medical Association at the Fifty seventh Annual Session June 1906

[1] Allaway Mont. Med Jour 1891 92 vol xx p 568

[2] Text Book on Therapeutics"

That shock and the depleted circulatory system can be effectually treated by intraperitoneal infusions must be admitted But the local effect on the peritoneum must be considered as well With the peritoneal cavity filled with blood, fluid or coagulated, would the effect on the conditions in the cavity be beneficial or detrimental? To determine this question it was decided that not only must the literature be consulted, but experiments performed Should the procedure prove to be a valuable one in every way, normal saline solution could be easily infused through the diagnostic canula, and in fact, the diagnosis and the treatment, whether curative or merely palliative before a laparotomy, would be embraced by one simple operation

In 1876 George Wegner[4] showed by animal experiments that the peritoneum absorbs gases, liquids and solids, that gall, muscle infusion, urine, blood and salt solution are absorbed without causing peritonitis and, furthermore, that all of the constituents of blood are absorbed in time without encapsulation It is surprising that most of the experiments with blood in the peritoneal cavity have been performed with defibrinated blood The absorption of defibrinated blood is of little clinical significance, but the results obtained by different investigators are interesting Orlow[5] injected 300 c c into the peritoneal cavity, after five hours the amount was unchanged, but after twenty-four hours 160 c c were absorbed Cordua, cited by Robinson,[3] working under Ponfick, found widely different phenomena After three days half of the defibrinated blood remained, five days elapsing before all was absorbed

The cause and path of the absorption of peritoneal fluids has been studied extensively by Wegner,[4] Dybkowsky,[6] Southgate,[7] Adler and Meltzer,[8] Orlow,[9] Starling and Tubby,[10] Heidenhain[11] and others, but the subject is as yet unsettled The fact that absorption occurs even after death, or after the introduction of deadly and irritating solutions, disproves the theory of "vital force" That the stomata play an important rôle was demonstrated experimentally by Ludwig[9] It is most generally accepted that the process is for the most part due to mechanical and physical forces Wagner[4] demonstrated that any increase in the intra-abdominal pressure hastens absorption, or in other words, the more fluid the peritoneal cavity contains, the more rapidly is the solution absorbed Warm saline solution was injected into two rabbits, into one 200 c c. and into the other 100 c c After one hour 134 c c. were absorbed in the first, and only 50 c c in the second Similarly saline solution was injected into two dogs, into one 870 c c and into the other 500 c c In the first, after one hour 170 c c were absorbed and in the other, after two hours only 100 c c Filtration, associated with increased intra-abdominal pressure must therefore be an important factor Nevertheless, filtration is active only to a certain extent, for in the event of enormous accumulation of fluid in the abdominal cavity, as in ascites, absorption is completely arrested That osmosis performs an important part must also be admitted,[12] for all agree that intraperitoneal fluids disappear in inverse ratio to their osmotic pressure, or in other words, the lesser the concentration of the fluid in the peritoneal cavity the more rapid is the absorption Consequently, the addition of normal salt solution, by increasing the intra-abdominal pressure would favor absorption by filtration and, by decreasing the concentration of the peritoneal contents, would favor absorption by osmosis

Whether absorption takes place by way of the blood vessels directly or indirectly through the lymphatics has little bearing on our subject and suffice it to say that after extensive labor Heidenhain,[11] Starling,[10] Wegner,[4] and others are unable to agree

A few words are necessary regarding cases of intraperitoneal hemorrhage associated with a possibility of infection Penetrating wounds of the abdominal wall, such as are caused by bullets and knives, usually prognosticate septic peritonitis Rupture of a hollow viscus following a non-penetrating injury may also complicate the hemorrhage with infection But the aspiration of urine, bile or fluid feces from the peritoneal cavity with the diagnostic canula would positively demonstrate the condition to the physician Many surgeons advocate and practice peritoneal irrigation in septic peritonitis, while on the other hand, as many others are positively opposed to the practice The arguments advanced by both factions are well known and need not be repeated at this time It is not my intention to speak for or against normal saline injections into the peritoneal cavity in case of hemorrhage associated with infection, but to confine myself strictly to those cases which are due to trauma not producing infection and after animal experimentation to summarize and draw conclusions relative to the practical value of the procedure at such times

II METHODS

Experiments were performed on fifteen dogs, strict surgical asepsis being practiced in each case The dog was anesthetized with chloroform, a median incision made, a loop of intestine withdrawn and a branch of the mesenteric vessels, both artery and vein, selected in such a place as to allow free circulation to the intestine without this branch Ligatures were placed around the vessels in two places and between them the vessels cut After permitting the vessels to bleed into the peritoneal cavity for a certain length of time, varying in the different experiments, the intestines were replaced To procure profuse bleeding it was necessary to treat two or more branches in the same manner In seven of the experiments, the wound was sutured immediately, while in the other eight warm sterile normal sodium chlorid solution (0 6 per cent), the amount varying in individual cases, was first infused Exploratory operations were performed under anesthesia on subsequent days to ascertain the presence or absence of clots and adhesions, the condition of the peritoneum and the character and approximate quantity of blood and fluid in the peritoneal cavity At the same time the rectal temperature was taken and general observations as to the dog's condition were recorded. On completion of each experiment the dog was dispatched with chloroform.

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[3] Robinson Byron The Anatomy and Physiology of the Peritoneum. A most extensive bibliography is found in this book.

[4] Wegner George Arch f klin Chir 1876 vol. xx.

[5] Orlow W N Arch f d ges. Physiol. Bonn 1894 vol lix pp 170-200

[6] Dybkowsky Ludwig's Arbeiten 1866

[7] Southgate Centbl f Physiol Leipsic and Vienna 1894 vol viii p. 440

[8]. Adler and Meltzer Jour of Exp Med. July, 1896.

[9] Orlow, W N Pflüger's Arch., vol lix, 1895

[10] Starling and Tubby Jour of Physiol 1894 vol xvi p 140

[11] Heidenhain Pflüger's Arch vol lix 1895

[12]. Leathes J B [illegible] of [illegible] vol xviii p 106

III. EXPERIMENTAL CASES

CASE 1.—Dog, temperature, 100.2 F., pulse regular, general condition good. About 2 ounces of blood were allowed to flow and normal salt solution was poured in from a flask until the cavity was nearly full.

Second Day.—Temperature, 101, pulse regular, general condition good. Peritoneum was normal and the cavity was approximately two-thirds full of bloody serum. No coagula were present.

Third Day.—Temperature, 101.2, pulse regular, general condition good. Peritoneum was normal and the cavity approximately one-third full of serum, only slightly blood tinged. No coagula were present.

CASE 2.—Male dog, temperature, 99.8, pulse regular, general condition good. About 2 ounces of blood were allowed to flow as before, but no salt solution was introduced.

Second Day.—Dog was weak, temperature, 103, pulse fast and feeble, respiration fast and choking. Peritoneum appeared normal and the cavity contained a small amount of bloody serum and a few clots in the omentum.

Third Day.—Dog was found dead. Peritoneum appeared dull, and a few adhesions were present between the intestinal loops. Peritoneal cavity contained small amount of clear fluid and a few clots in the omentum.

CASE 3.—Male dog, temperature, 100, pulse regular, general condition good. About 2 ounces of blood were allowed to flow and salt solution was added until the cavity was full.

Second Day.—General condition was good, temperature, 100, pulse regular.

Third Day.—Dog was rather weak, temperature, 101.8, pulse regular. Peritoneum was normal, and the cavity was about one-third full of fluid, slightly blood tinged. No clots were present.

CASE 4.—Female dog, temperature, 101, pulse regular, general condition good. About 3 ounces of blood were allowed to flow, and no salt solution was introduced.

Second Day.—General condition was fair, temperature, 101.5, pulse regular. Peritoneum normal. Intestinal coils were bathed in a large amount of the bloody serum. No clots were present.

Fourth Day.—Dog was very weak, temperature, 103.8, pulse feeble. Peritoneum normal. Light peritoneal adhesions between intestinal loops, due to small organizing blood clots, were found. A small amount of blood tinged serum was present.

CASE 5.—Female dog, temperature, 102.2, pulse regular, general condition good. About 4 ounces of blood were allowed to flow and no salt solution was introduced.

Second Day.—Dog was in good condition, temperature, 102.2, pulse regular. Peritoneum was normal and cavity contained a small amount of bloody serum. No clots or adhesions were present.

Third Day.—Dog was weak, temperature, 103.5. Peritoneum was normal and cavity contained only a small amount of serum, slightly blood stained. No clots or adhesions were present.

CASE 6.—Female dog, temperature, 99.4, lively and in good condition. About 3 ounces of blood were allowed to flow and salt solution was added until the peritoneal cavity was full.

Third Day.—Dog was in good condition. Peritoneum was normal and cavity was about one-third full of blood tinged serum. No clots were present.

Fourth Day.—General condition was good, temperature, 101.6, pulse regular. Peritoneum was normal and cavity contained only a small amount of clear serum. No clots or adhesions were present.

CASE 7.—Male dog, temperature, 101.4, pulse regular, general condition good. Blood was allowed to flow until about 5 ounces were introduced. Normal salt solution was added until the abdomen was full.

Second Day.—General condition was good. Peritoneum was normal and cavity was about one-half full of blood tinged serum. No coagula or adhesions were present.

Third Day.—General condition was good, temperature, 102, pulse regular. Peritoneum was normal and cavity about one-fourth full of slightly blood tinged serum. No clots or adhesions were present.

CASE 8.—Female dog, temperature, 99.3, pulse regular, general condition fair. Blood was allowed to flow until peritoneal cavity contained about 5 ounces. No salt solution was introduced.

Third Day.—General condition was poor, temperature, 102.6, pulse regular. Peritoneum was normal and cavity contained about 2 ounces of bloody serum. A large clot formed on the mesenteric side of the intestine near the vessels, causing a kink in the intestines. No adhesions between intestinal loop were present.

CASE 9.—Male dog, temperature, 101.3, pulse regular, general condition fair. Blood was allowed to flow until the cavity was nearly full, containing 7 to 8 ounces. No salt solution was introduced.

Second Day.—Dog was weak, temperature, 103, pulse fast.

Fourth Day.—Dog was very weak, temperature, 102.2, pulse regular. Peritoneal cavity contained a small amount of bloody serum. Peritoneum was normal, but large coagula formed between the intestinal loops causing adhesions, which were about to organize and become fibrous.

CASE 10.—Female dog, temperature, 100.1, pulse regular, general condition good. Blood was allowed to flow until the cavity was nearly full, containing 7 to 8 ounces, and no salt solution was added.

Second Day.—General condition was good, temperature, 101.2, pulse regular. Peritoneal cavity contained a large amount of bloody serum and a small clot around the ligated artery.

Fourth Day.—General condition was poor, temperature, 103.4, pulse feeble and fast. Peritoneum was normal, and cavity still contained about 2 ounces of bloody serum. The clot was larger and the intestine kinked by its beginning contraction.

CASE 11.—Female dog, temperature, 102.1, pulse regular, general condition fair. Blood was allowed to flow until the cavity was full, containing 7 to 8 ounces. No salt solution was introduced.

Second Day.—General condition was poor, temperature, 101.8, pulse fast but regular.

Fourth Day.—Dog was so weak she could scarcely walk, temperature, 103.8, pulse weak. Peritoneum was normal and cavity contained a small amount of bloody serum. Large clots in three places caused beginning intestinal adhesions.

CASE 12.—Female dog, temperature, 100.8, pulse regular, general condition good. Blood was allowed to flow until the peritoneal cavity was nearly full, containing about 7 or 8 ounces. Salt solution was added until the cavity would hold no more.

Second Day.—Temperature was 101.6, dog in good condition.

Fourth Day.—Temperature, 101.4, dog in good condition. Peritoneum was normal and the cavity contained a small amount of slightly blood tinged serum. No clots or adhesions were present.

CASE 13.—Male dog, temperature, 101.6, pulse regular, but feeble, dog in only fair condition. Blood was allowed to flow until the cavity was full, and the wound was sewed up. The dog became weak and nearly died on the table. The trocar was employed, and about 3 ounces of blood were withdrawn through the canula by a hypodermic syringe attached to the canula. About 3 ounces of warm normal saline solution were then injected. The dog speedily recovered from the anesthetic.

Second Day.—Dog was in poor condition, temperature, 102.2, pulse irregular and weak.

Fourth Day.—Temperature, 102.8, dog was still weak, worse than on first day. Peritoneum was normal and cavity contained a small amount of clear fluid. No coagula or adhesions were present.

Case 14—Female dog, temperature, 101 2, pulse regular Dog was normal but vicious Blood was allowed to flow until the cavity was nearly filled About 3 ounces of salt solution were poured into the cavity

Second Day—General Condition was good, temperature, 102 2

Fourth Day—Dog was in good condition, but vicious Peritoneum was normal, and the cavity contained a small amount of clear serum No clots or adhesions were present

Case 15—Female dog, temperature, 101 8, pulse regular, general condition good The dog was treated as in Case 14

Second Day—General condition was good, temperature, 101 8, pulse regular

Fourth Day—General condition was good, temperature, 102 4, pulse regular Peritoneum was normal and the cavity contained a small amount of clear serum A small clot was found in the omentum, but no clots or adhesions were present around the intestines found in the omentum of one which was profusely bled

5 In six of the seven which were not infused organizing clots were formed destined to become fibrous adhesions They were most marked in the three that were profusely bled and in these subjects would ultimately have resulted in intestinal strangulation

6 The blood was absorbed more rapidly in those dogs that received infusions In four out of five of the injected dogs that were kept until the fourth day, nothing remained but a small amount of clear serum, the serum being slightly blood-tinged in the fifth

7 In the four non-injected dogs which were kept until the fourth day, the serum which remained was bloody or blood-tinged in each case

8 The most marked advantages of saline infusion were found in those cases which were bled profusely

SUMMARY

Case Number	Sex	Temperature Before Operation.	Approximate Amount of Hemorrhage	Approximate Amount of Saline Solution Injected	Temperature Subsequent to Operation			Remarks			
					Second Day	Third Day	Fourth Day	General Condition	Peritoneal Contents: Fluids	Peritoneal Contents: Clots and Adhesions	Peritoneum
1		100 2	2 oz.	8 oz.	101	101 2		Good throughout	On third day, about 3 oz of blood tinged serum	None	Normal
3	M	100	2 oz	8 oz.	100	101 8		Weak on third day	On third day about 3 oz. of blood tinged serum	None	Normal
6	F	99 4	3 oz	7 oz.			101 6	Good throughout	On fourth day small am t of clear serum	None..	Normal
7	M.	101 4	5 oz.	5 oz		102		Good throughout	On third day, small am t of blood tinged serum	None	Normal
12	F	100 8	7 to 8 oz.	3 oz	101 6		101 4	Good throughout	on fourth day small am t of slightly blood tinged serum	None	Normal
13	M	101.	7 to 8 oz.	3 oz through canula	102.2		102 8	Progressi'ly weaker nearly died during operati'n	On fourth day small am t of clear serum	None	Normal
14	F	101 2	7 to 8 oz.	3 oz.	102 2			Good but very vicious	On fourth day small am t of clear serum	None	Normal
15	F	101 8	7 to 8 oz	3 oz.	101 8		102 4	Good throughout.	On fourth day small am t of clear serum	Small clot in omentum No clots or adhesions among intestines	Normal
2	M	99 8	2 oz.	None	103	Dead		Good at start. Poor on sec nd Dead on third	On second day small am t of blood tinged serum	Clot in omentum on second day Intestinal adhesions after death	Peritonitis
4	F	101	3 oz	None	101 5		103 8	Good at start Poor on fourth	On fourth day small am t of blood tinged serum	On fourth day small clots cau ing light peritoneal adhesions	Normal
5	F	102 2	4 oz.	None	102 2		103 5	Progressively poorer	On third day, small am t of serum, slight'y blood tinged	None	Normal
8	F	99 3	5 oz.	None		102 6		Fair at start, but progressively *poorer*	On third day about 2 oz. of bloody serum	Large clot causing kink in the intestine, but no adhesions to other parts of intestine	Normal
9	M	101 3	7 to 8 oz.	None	103		102 2	Progressively worse	On fourth day small am t of serum very blood tinged	Large clots causing intestinal adhesions on fourth day	Normal
10	F	100 1	7 to 8 oz.	None	101 2		103 4	Good at start Poor fourth day	On fourth day about 2 oz of bloody serum	On fourth day, clot kinking intestine No clots or adhesions	Normal
11	F	102 1	7 to 8 oz	None	101 8		103 8	Fair at start. Became extremely weak	On fourth day small am t of bloody serum	On fourth day three large clots, causing intestinal adhesions.	Normal

DISCUSSION

1 Of the fifteen dogs, eight received infusions

2 Of these eight dogs, six were in good condition throughout the experiment, the other two becoming progressively weaker In only four of these dogs was the temperature over 102,* the highest record being 102 8 A glance at the table shows that temperature occurred only in those infused dogs which were bled most profusely [1]

3 All the dogs which were not injected grew progressively weaker after operation, one dying before the third day, probably of peritonitis In all of the non-infused dogs fever was present at some time, in only one below 103 degrees

4 No peritoneal adhesions were present in any of the eight dogs that received saline infusions, a small clot was

IV CONCLUSIONS

1 The infusion of normal saline into the peritoneal cavity should be practiced in every case of hemorrhage not associated with infection, for two general reasons 1 Its effect on shock 2 Its beneficial action on the peritoneum and the conditions in the peritoneal cavity In some cases the procedure would prove palliative, in others curative

2 In cases of intraperitoneal hemorrhage accompanied by shock so severe that an immediate laparotomy would inevitably prove fatal, the infusion at once of warm sterile normal saline solution into the peritoneal cavity would certainly do no harm, but on the other hand would stimulate the peritoneum and at the same time tend to counteract the [illegible] and [illegible]pare the system for any [illegible]parotomy

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* The average rectal temperature of dogs is 101 5 F

3 In cases in which hemorrhage might cease and a laparotomy be not needed, the procedure would be of the greatest value Apart from combating shock, the solution would mingle intimately with the blood, hold the particles in suspension and hasten absorption of the fluids in the peritoneal cavity without allowing coagula to form, to be the foundation of troublesome and perhaps fatal adhesions and strangulations

4 The procedure would not require great skill, but would be feasible in the hands of any general practitioner The following is offered as a suggestion The solution should be kept sterile in a flask, fitted in a portable case, which could also contain a compartment for a small bottle of alcohol, in which to keep the trocar sterile and ready for use, and another to accommodate a long sterile rubber tube to serve as a connection between the flask and canula Then in case of emergency the solution could be quickly raised to the required temperature, a small area of skin sterilized, the trocar introduced and the diagnosis made, the flask and canula connected and, by raising and lowering the flask, the flow could be regulated and the amount noted After a gentle flushing of the peritoneal cavity, 500 c c to 1,000 c c might be kept within and the patient sent to the hospital, the better prepared for later developments

DISCUSSION

Dr Winfield S Hall, Chicago, in reply to questions, said that no leucocyte count was taken during these experiments The hemorrhages were produced thus A small incision was made and one of the branches of the mesentery artery cut through this incision and allowed to bleed until the intra visceral spaces were partly or wholly filled, and then the wound was closed There is no way of determining the exact amount of hemorrhage without drawing it off in some vessel and then putting it back. Dr Hall said that it was not thought desirable to depart so far from what would be found in ordinary cases Some observers have withdrawn blood and defibrinated it

Dr S J Meltzer said that he believed that if the bleeding comes from a small artery the best plan is to leave it alone, since the contraction of the vessel wall in conjunction with the clotting will soon stop the bleeding, aided especially by the intra abdominal pressure Bleeding from large vessels can be stopped only by ligature after laparotomy has been made If, however, the bleeding comes from the parenchyma of a ruptured organ, a transfusion of saline can do only harm, since it would tend to increase the blood pressure and with it the bleeding Transfusion can be useful only after the bleeding has stopped to supplant the lost blood, but can hardly be employed for the purpose of stopping the bleeding

Dr. V C Vaughan, Ann Arbor Mich, said it is the consensus of opinion that it is bad to inject salt solution or anything else when there is a possibility of infection The abdominal cavity is divided into departments If solution is used it carries the infection For this reason surgeons are giving up the washing out of the cavity It spreads the infection and carries it to every part of the intestine and makes the surface on which the germs grow much larger Those who do not wash out the cavity certainly have the best of the argument

Dr Winfield S Hall, Chicago, said that an artery was chosen for the experiments because of difficulty in controlling the hemorrhage while getting the amount of blood wanted from the spleen or liver There were fifteen dogs, eight had saline solution and seven did not. Those that did not have the saline solution had a considerable rise in temperature In the case of the dogs that had it there was no evidence of temperature The wounds were opened up to see the progress of recovery In several cases in which no saline solution was used clots formed which made it very evident that the course of recovery would yield to adhesion that might cause strangulation In no case in which saline solution was introduced was anything of that kind shown So far as appearance goes, the experiments left no doubt but that saline solution was of great value As Professor Vaughan pointed out when there was a rupture of the intestine with danger of spreading the infection, this would be bad procedure

Dr. S J Meltzer, New York, asked what was the cause of the difference when no saline solution was used

Dr Winfield S Hall said that there was one case in which asepsis had miscarried and in that case there was some temperature. In other cases he could account for the increase of temperature only as due to the action of the peritoneum There was no infection It may have been due to absorption of the clot He usually associates it with infection, but there did not seem to be any infection

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OBSERVATIONS ON THE FUNCTIONS OF THE ASSOCIATION AREAS (CEREBRUM) IN MONKEYS *

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Our knowledge of the functions of the cerebrum has been obtained from studies of the effects of stimulation and destruction of the various parts of the organ In this study both physiologists and clinicians have been engaged Physiologists have spent most time in determining the effects of lesions, experimentally produced, and the motor accompaniments of stimuli of different kinds The clinicians, including surgeons, neurologists and pathologists, have been able to observe in man the effects of destructions from accidents, disturbances of functions from emboli, thrombi and hemorrhages, and in some cases it has been found practicable to stimulate the cerebral cortex in man after the fashion of the physiologic experiments and thus to map out the muscular reactions represented in the cortex

PHYSIOLOGIC AND CLINICAL METHODS

Both the physiologic and the clinical methods have advantages and disadvantages On animals the physiologist is enabled to limit the lesion, to repeat his experiments often and to make detailed observations on individual points, to use any or all the apparatus of a laboratory and to observe his "patients" before and after an experimental accident The clinician, who is dependent on "Nature's experiments," is limited in some of these directions, but on the other hand he has a great advantage in that he deals with men From the responses of a patient one can learn more of his feelings, of his sensations and of his other mental states than is possible with animals, and the lack or disturbances of speech ability which are found in some individuals are of more value for the understanding of certain cortical functions than hundreds of experiments on dogs or cats or monkeys The two methods, it is well understood, supplement each other, and the student of brain functions must consider and weigh the results of both

Both methods have been most successful in the determination of the motor and of the sensory functions of the cerebrum The physiologists have been unable to advance our knowledge of the workings of the so-called association areas represented by over one-half of the

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* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty seventh Annual Session, June 1906

*The present paper is in the nature of a preliminary communication. A full account of the experiments which were made will be published soon The work on monkeys was made possible by a grant from the Carnegie Institution of Washington to the author cerebral cortex These portions of the brain do not produce a motor response on stimulation, and the effects of destructions or extirpations are not worked out On the other hand, in only one particular have the clinicians been able to demonstrate clearly the functions of any of these parts, viz, in the localization of the functions of speech The relative importance of the frontal or the parieto-occipital association areas in mental states has been often considered and the conclusions have been totally different The more recent attempts have been to locate "mind," or the "higher intellectual faculties" in the frontal region, more especially in the prefrontal lobes

In this country Phelps[1] and Mills[2] have championed the cause of the frontal lobes, particularly the left, as the seat of "thought" This has been done, it seems to me, without a sufficient analysis of the mental symptoms associated with cerebral injuries and without careful studies of the brains of individuals with high and low mental development. On this latter point it may be mentioned that the brains of Gauss and Helmholtz, which have been considered by Mills to indicate the predominant importance of the frontal lobes in intellectual states, are described by Clapham[3] as examples of great complexity of convolution in the zone between the Rolandic and the visual areas Clapham, consequently, considers this region to be particularly associated with high mental development The cases cited by Mills and those given in Schuster's admirable book,[4] which bear on the subject of the functions of the associational areas, I shall consider in detail in another article

PHELPS' WORK.

There is time now to take up only very briefly some of Phelps' cases and conclusions This I shall do in support of my previous statement that the conclusions regarding the functions of the frontal lobes have been drawn without a sufficiently careful analysis of the mental conditions in the cases of cerebral injury "Loss of consciousness, the event of stupor or the access of delirium have been found to be dependent on the nature of the lesion, apparently uninfluenced by its situation," is a general justifiable deduction made by Phelps from all his cases[5] From the results of his frontal-lobe cases the following conclusions are drawn[6]

> 1 Mental decadence always attends conjoint lesions of both prefrontal regions 2 Mental decadence always attends lesion of the left prefrontal region alone. 3 Mental decadence never attends lesion of the right prefrontal region alone

The cases of frontal laceration cited in his book and the sixteen cases in his article do not admit such broad inferences Of the eleven cases of laceration of the left frontal lobe only Cases 6 and 9 were undoubtedly conscious and without stupor or delirium, but with a mental change Ten cases of laceration of both frontals (pp 130-131) include four patients in whom the mental condition was 'normal" on days following the injury, and Case 300 (p 580) is probably an example of mental impairment with lesion of the right frontal lobe It is unfortunate that all of the individuals with lesions in the left frontal alone, or in both frontals, whose cases are given in Phelps' recent article, died soon after the accidents We can see, however, that not all individuals had their mental faculties located in the left frontal lobe The patient in Case 2 with a left frontal lesion comprehended up to the morning of his death The patient in Case 3, although there was a certain amount of stupor and fever coincident with the left frontal injury, could be roused sufficiently to answer questions, and when the fever had only partially subsided the "comprehension was less delayed" In Case B, a fall on the right side, the patient showed a mental defect for at least two weeks In Case C patient was discharged on the twenty-second day with delusion persisting after injury to the right side of the head In Case D, a fracture on the left side, patient was entirely rational at the end of the fourth week I am well aware that the cerebral lesions in the last three cases were not determined, but we are as certain that the brain injury in Cases B and C was on the right side as that it was on the left in Case D

From a psychologic standpoint, what is lacking in all the accounts is a careful analysis of the mental condition Apathetic, dull, stolid, irritable, restless, nervous, deficient memory, slow comprehension, are general terms for conditions which, for scientific purposes and in the present stage of psychology, the observer could and should try to describe more carefully Any one of these terms may be descriptive of states of deficient or wandering attention, some are indicative of a mild degree of delirium It is of prime importance that every case should be examined from a psychologic standpoint, if psychologic inferences are to be drawn

A similar criticism must be made regarding the conclusions of most physiologists in regard to the functions of the association areas The observations which they have made are even more "casual" than the clinical ones Loeb[7] says that it is "impossible to notice the slightest difference in the mental functions of the dog" if both frontal lobes are removed, although he does note that if the anterior halves of both hemispheres be removed an animal becomes "idiotic" Such a careful observer as Schäfer[8] uses the term "semi-idiocy" to scribe the mental condition in monkeys following removal of the temporal lobes Idiocy in children difficult to diagnose from simple observation and term "semi-idiocy" has no meaning in psychologic p tice

For the reason that the description of results of p vious physiologic work on the association areas lacking in exactness and definiteness, about six yea ago I devised a method to determine more accurately the functions of these parts in animals The mental life of animals, and even of man, is made up very largely of series of association, which in general terms are of a simple sensory-motor character[9] Any definite sensory-motor association may be produced in an animal in a very few days, and it is possible to discover whether or not the association persists after removal of parts of the cerebrum

AUTHOR'S EXPERIMENTS ON CATS

The results of an investigation of this character, viz, on the relation of the frontal lobes to the production and retention of simple sensory-motor habits in cats, have already been published[10] In that article the method is described in full I may paraphrase briefly

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[1] Traumatic Injuries of the Brain second edition 1900 also articles in the New York Med Jour, 1894-5 and Jour Med. Sci 1902, 1906.

[2] Mills and Weisenburg Localization of the Higher Psychic Functions, The Journal A. M A. 1906 vol xlvi p 337

[3] Jour Ment. Sci 1898 vol. xliv p 290

[4] "Psychische Störungen bei Hirntumoren' 1902.

[5] 'Traumatic Injuries to the Brain" p. 127

[6] Am Jour Med Sci., vol cxxxi p 457

[7] Comparative Physiology of the Brain, p. 275

[8] 'Text book of Physiology '

[9] For an account of animal psychology and the mental life of animals the reader is referred to the works of Thorndike Lloyd Morgan and Hobhouse.

> An animal is placed in a certain environment, usually unpleasant or indifferent to the animal By a simple motor adjustment the cat or the dog or the monkey gets a subsequent pleasure (for example, some food) At first the motor response is neither accurate nor speedy, but soon the animal learns—i e, forms the association of a definite movement or set of movements with a given situation When the association or habit is "set," it is possible to discover that portions of the cerebrum are concerned in its production or retention by the extirpation of definite regions and the determination of the presence or absence of the association If, after the destruction of a part of an animal's brain, there is no alteration in its mental condition, the time for the production of a movement or set of movements, when the animal is placed in a situation calling for such motor response, should remain the same. It was found, however, that after a bilateral lesion in the frontal lobes certain habits were lost This result, it was shown, could not be due to "shock," for other brain lesions were not followed by loss of such associations Unilateral lesions in the frontal areas were followed by a slowing of the motor response

AUTHOR'S EXPERIMENTS ON MONKEYS

Some similar and some totally negative results from similar experiments have been obtained with monkeys by me since the publication of the experiments on cats These I wish to report at this time The simple associations which I produced in the monkeys are what may be called "food box" and "hurdles"

The Food-Box Experiment—In the food-box experiment the animal was placed in a small cage, about eighteen inches cube, which was covered with wire netting and to which was attached at the back, in the upper right-hand corner, a smaller "food box" about seven inches cube The door of the food box was fastened by an old-fashioned turn-button, which had to be turned through an angle of 90 degrees before the door of the box could be opened A greater or less turn would keep the door of the box closed The button of the food box was placed sufficiently high, so that the animal had to stand and reach for it A hungry animal was placed in the small cage, food was put in the box and the animal attempted to get at the food When the animal was first placed in the peculiar situation it made many random movements, trying to squeeze through the wire netting, shaking the door and putting its hands all over the box and the cage In its random movements the button may be turned and the door of the box come open The animal sees the food, takes it and eats After a very few trials the attention of the animal is almost exclusively centered on the food box and its door, and so soon as the food is placed in a box it will immediately turn the button The association has been formed This association will persist for a long period two to three months, without materially altering the average time for the performance of the complex act

The Hurdle Experiment—The "hurdle" gave a situation a little more complicated The animal was placed on a box ten inches high, from which it jumped or walked to a bar fifteen inches high, thence to another bar ten inches high, through a hole six inches in diameter, in a box six inches deep, then up and down two short ladders placed together, and finally it lifted the lid of the middle one of three boxes in which it found some food The "hurdle" or obstacle race is much simpler than the description would indicate, its complexity is rather at the end in the choice of the proper (i e, the center) box for food

When an animal had learned the "hurdle" or "food box," of both, it was put aside for a week or ten days, with no practice, and then its memory was tested A few extra trials to get the habit well learned were given and then the frontal lobes were cut away from the rest of the cerebrum The surgical procedure was the same as I had previously used with cats[11] Nine monkeys learned one or both of the associations and survived the operation for a sufficient length of time to have their memories tested Some lived over nine months Seven of the animals were of the macacque family, two were ringtails

RESULTS

The final results of the experiments I may group in three general divisions

A This class consists of two monkeys, both lost their newly-formed habits after the removal of the frontal lobes The tests of retentiveness in these cases were made, respectively, about 24 and 40 hours after the operations The results were very decided Neither of the animals moved toward the door of the food box, but made random movements about the cage One of the animals was restless, the other was stolid and indifferent Each lived only a very few days (three and five, respectively) The autopsies showed that the frontal portions had been cut away from the rest of the cerebrum, but there was in one case an increase in intracranial pressure which was evidenced by a bulging of the brain substance when the bandage and trephine buttons were taken off The results in these cases are in themselves of little value for the drawing of conclusions, it seems to me, because the animals survived the brain lesions for only a short time It should be remarked, however, that the interval between the operation and death in both cases is as long as between accident and death in man in many cases which the clinicians report and which are highly rated

B The second class consists of three animals, a rhesus monkey and two ringtails, who lost their newly-formed associations after the removal of the frontals All these animals lived a sufficiently long time to determine that the loss of habits was not due to the primary shock effects of the operation on the brain, but was a loss of the sensory-motor associations The rhesus monkey died from hemorrhages subsequent to a second operation three months after the first operation During the interval between the first and second operations the animal seemed perfectly normal (with the exception that the "food-box" and "hurdle" habits were lost), and when with other animals in a large cage it was impossible to note any difference in its behavior This animal in the months following the first operation relearned the "food-box" association and the second operation was performed to determine what portion of the brain was concerned in the production of the habit after the prefrontals were excised. In cats I found that it was possible to teach an animal a trick, to remove the prefrontals and find the habit lost, then to have the animal relearn the same trick and to have it lost after removal of more of the frontals, and in the same manner for a third time to have an association formed and to have it lost subsequent to a third operation It is possible, therefore, to have a mental defect, but to have a recovery in animals within a very short time, by a process of relearning. A similar recovery has been obtained in the event of disturbance, or even of destruction, of the speech centers in man.

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[10] Am. Jour Physiology 1902, vol viii p 1

[11] Am Jour Physiology 1902, vol viii, p 5

The other two animals that showed a loss of associations after the removal of the frontals lived, respectively, six and two months. Both of these ringtails had learned to jump from a shelf to my shoulder when I snapped my fingers, and this habit was lost as well as the "hurdle" and "food-box." Subsequent to the operation both of these animals seemed less friendly, they chattered more and screamed and showed their teeth when another monkey or a person approached them. In other respects their behavior was normal.

C. In my article on the effects following lesions of the frontal lobes in cats[12] I pointed out that habits, i. e., associations, of long standing were not lost after destruction of the prefrontal regions. A similar result was found with four monkeys in the present research. The associations which were investigated were mainly those of the "food-box." The most important of these cases is that of a female rhesus, living at the present time, two months after the operation, which was practiced on the "food-box" for 27 days, 5 times a day, over a period of 234 days. This animal learned to open the door of the "food-box" in an average time of 1.1 sec. before the operation, and two days after the operation the average time of 10 experiments was found to be 1.8 sec. At the middle of the tests with this monkey a period of 160 days was left free from any practice on the "food-box," and after this long interval the memory for the performance of the appropriate movements was perfect, average time before interval, 3.8 sec., average time after interval, 4.4 sec. In this monkey the motor response partook of the nature of a reflex, and it is possible that the cerebral cortex was no longer used for the sensory and motor association, but that the adjustment was made in the basal ganglia. Probably a similar process in man of the assumption by lower centers of activities which at first are carried on by the higher is to be found in the learning of games, etc.

A male rhesus who was practiced 18 days over a total period of 43 days showed, so far as the ability to perform his "tricks" was concerned, no effect after the removal of both frontals. Another animal, a macacque, was trained for 15 days, and after operation his ability measured by the average time to perform tricks was lessened. Before the destruction of the frontal lobes he averaged 1.8 sec. for opening the "food box," after the operation and for a few days his time was greatly lengthened, e. g., on the second day it averaged 23 sec. The fourth monkey which did not lose its habits after the removal of the frontal lobes also showed a retardation. In this animal the slowing was, however, not so marked as in the previous case.

CONCLUSIONS

Conclusions to be drawn from the experiments may be summed up as follows:

1. In monkeys, as well as in cats, the frontal lobes are normally employed in the formation of simple sensory associations.

2. When the frontal lobes are destroyed, recently formed habits are lost. It has been found possible, however, for the animal to form new associations or to relearn old tricks.

3. When the associations are firmly established, destruction of the frontals is not always followed by a loss. There are all degrees of "memory" for any such particular habit, from perfect to a very decided hesitancy and slowing.

4. In this latter event the cerebral path is probably shortened, and the nervous connection of the sensory and the motor elements of the association takes place through tracts at the brain stem. The association has, therefore, more of the character of a reflex.

In addition to their value in indicating the functions of part of the associational areas in monkeys the results, I think, have a suggestive import for workers on the pathology of the brain of man. The experiments show not only that there are mental changes coincident with disturbances of the frontal lobes, but that the mental change which is described is one that could not be determined by simple observational methods, and they suggest, furthermore, that, for the determination of corresponding changes in man, accurate psychologic or psychophysical methods should be employed. The clinical, as well as the physiologic, evidence points to a dependence of certain mental processes on the integrity of the frontal lobes, and I am much inclined to believe that the frontal or prefrontal areas are of great value in our mental life. I feel, however, that the reported clinical observations do not prove this and that there is great need for more careful psychologic examination and experiment in the hospitals. The weakness of the clinical work is that so much is claimed without an adequate analysis of the mental conditions of the patients.

Much more and better information could be gathered if the patients were tested along the lines which are followed in psychologic laboratories and psychiatric hospitals. In any scientific work there can not be too great accuracy either in methods or in results. This is particularly true when the subject of research is so elusive a thing as is "mind." Careful dissection, sectioning and the use of good microscopes are deemed necessary in other fields of medical work and psychologic scalpels, microtomes and high power lenses are indispensable to one who would attempt to solve the problem of the relation of the brain to mental processes.

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[12] Am. Jour. Physiology, 1902, vol. viii, p. 22.

FURTHER OBSERVATIONS ON THE INFLUENCE OF ALCOHOL ON THE METABOLISM OF HEPATIC GLYCOGEN *

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The present report gives the results of a further study of the possible influence of alcohol on the metabolism of glycogen in the liver. It has recently been shown that, to a certain extent, alcohol can replace the carbohydrates of our daily diet. Consequently it would seem *a priori* that it might indirectly be a glycogen former, by sparing the carbohydrate radical of the tissue proteins, which may serve as a source of glycogen. The results of Nebelthan's[1] investigations, indeed, lend some support to this view. He found considerable quantities of glycogen in the liver of the hens to which large amounts of alcohol were fed after they had been starved for six days. In one of his experiments he found as much as 3 5 per cent of glycogen in the liver after feeding 10 c c of 96 per cent alcohol per kilo in twenty-four hours

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* Read in the Section on Pathology and Physiology of the American Medical Association at the Fifty-seventh Annual Session, June, 1906.

* From the Department of Physiological Chemistry of Columbia University at the College of Physicians and Surgeons, New York.

[1] Nebelthan: Ztschr. f. Biol., 1891, vol. xxviii, p. 138.

To test the hypothesis suggested, I carried out a number of experiments[2] on apparently normal rabbits kept on an exclusive diet of alcohol for from four to six days. Normal rabbits were used as controls They fasted from four to six days and did not receive alcohol During the period of fasting, water was given to them by means of a stomach tube This precaution was taken in order to control the possible loss of glycogen due to occasional struggling of the rabbits during the administration of alcohol

The results of a number of observations have shown that alcohol given in moderate quantities (10 c c of 30 per cent alcohol per kilo of rabbit daily) does not cause the accumulation of glycogen in the liver The results were likewise negative when a somewhat larger quantity of alcohol (15 c c of 60 per cent alcohol per kilo of rabbit daily) was used

Attention was then directed to the effect of alcohol on the hepatic glycogen after it has accumulated in the liver This problem presented itself under two aspects (A) Does alcohol, on account of its high calorific value, spare the glycogen of the liver and thus retard its disappearance, or (B) if it fails to do so, does alcohol behave like various other toxic substances in this regard and accelerate the disappearance of glycogen from the liver?

A In order to answer the first question, rabbits were fed on carrots from three to four days when they contained approximately the maximum accumulation of hepatic glycogen All food was then withheld from four to six days Alcohol (10 c c of 30 per cent alcohol per kilo daily) was given daily by mouth by means of a stomach tube during the period of experimentation

The results of a number of experiments have shown that the glycogen content of the liver in some alcohol-fed rabbits (at the end of the period indicated) was very small, in others the liver contained only a trace of glycogen Only in the liver of one alcohol rabbit was the amount of glycogen appreciable— 8 per cent. In two experiments with larger quantities of alcohol (12 c c and 15 c c of 60 per cent alcohol per kilo given for four days), there was not even a trace of glycogen The control rabbits, which fasted from four to six days and were given water in the way indicated, proved to be as poor in hepatic glycogen as the alcohol rabbits The conclusion is, therefore, justified that 30 per cent alcohol when given in the amounts stated does not spare the glycogen of the liver, while the two experiments with larger quantities of alcohol suggest that a more rapid transformation of glycogen has taken place

That various poisons cause rapid disappearance of glycogen from the liver was shown by several investigators Thus Drummond and Paton[3] have shown that in acute adrenalin poisoning in rabbits the glycogen of the liver is markedly diminished Doyon and Kareff[4] caused rapid disappearance of hepatic glycogen by injecting adrenalin chlorid into a branch of the portal vein, The same authors[5] obtained similar results with pilocarpin Kaufholz[6] has shown that phosphorus poisoning in rabbits is followed by a rapid disappearance of liver glycogen Kriukoff,[7] who studied the effect of a large number of poisons on hepatic glycogen, reported that, after the subcutaneous injection of arsenic, phosphorus, pulegnon, corrosive sublimate, anilin, phenylhydrazin, pyrogallol, sulphuric acid, sodium hydroxid and carbolic acid, the glycogen disappears from the liver in twenty-four hours, while alcohol has the same effect on hepatic glycogen when it has been injected subcutaneously for a long time Garnier and Lambert[8] state that, after the intravenous injection of a solution of sodium chlorid, glycogen disappears from the liver Mohr,[9] who experimented with various gastrointestinal irritants, found the liver free from glycogen after the administration of aloin, croton oil and arsenious acid Koch,[10] in his studies of corrosive sublimate poisoning, found the same effect on glycogen Kissel,[11] working in the same laboratory, corroborated the findings of Koch and also made the interesting observation that the disappearance of glycogen in corrosive sublimate poisoning is inhibited by alcohol and glycerol Bacterial toxins seem to hasten the disappearance of liver glycogen much more than the other poisons mentioned Thus Luschi[12] found that the glycogen of the liver of animals brought to a maximum of glycogen accumulation is already diminished six hours after infection Colla,[13] who studied the effect of infectious diseases on glycogen, found that it disappears after tetanus, diphtheria, anthrax, pneumonia He also studied livers of a number of children who died of diphtheria Four, ten, twelve hours after death the livers were free from glycogen

B In order to answer our second question, rabbits were used as in all the preceding experiments and were fed by mouth through a stomach tube Various amounts of glucose dissolved in water were given for a period not exceeding twenty-four hours Alcohol was administered either immediately after the glucose or in some experiments a few hours were allowed to elapse between the last feeding of glucose and the first dose of alcohol In some experiments two doses of alcohol were administered at intervals of from eighteen to twenty-four hours In one experiment (No 28) only one dose was given, while one rabbit (No 29, a) received three doses of alcohol As controls, I used rabbits treated in all respects the same as the alcohol rabbits, except that alcohol was withheld From sixteen to fifty-four hours after the last feeding of glucose the rabbits were killed, the livers rapidly removed and subjected to analysis for glycogen by the shorter method of Pfluger[14]

The analytic results given in the table show with one exception (No 26, a) a marked diminution in the glycogen of the livers of the alcohol rabbits as compared with the controls Thus, sixteen hours after the last feeding of glucose the total amount of glycogen obtained was 3 7 per cent in the control, while in the alcohol rabbit which received the same amount of glucose (20 gm in twenty-four hours) the quantity of glycogen found in the liver was 1 76 per cent, less than half that found in the control

In the next series the rabbits were given a single dose of 5 gm of glucose per kilo They were killed twenty-eight hours later Excepting No 26A, this series showed in a striking manner the action of alcohol in hastening the transformation of hepatic glycogen, for, whereas the amount of glycogen in the controls was 1 14 per cent and 2 3 per cent, the livers of the two alcohol-fed rabbits were free from glycogen The administration of alcohol after feeding much larger quantities of glucose (20 gm per kilo in twenty-four hours) was accompanied by similar results when the rabbits were killed in from fifty-two to fifty-four hours after they received the final dose of glucose In the two controls of this series the amount of glycogen obtained was 11 per cent in one, 1 14 per cent in the other, whereas the livers of the two alcohol rabbits were free from glycogen In another experiment of this series (No 28, a) the rabbit received the same amount of glucose per kilo in twenty-four hours, but, as he was in a dying condition, apparently from the effects of alcohol, he was killed thirty hours after he had received the final dose of glucose The liver of this rabbit contained only 1 33 per cent of glycogen, which is only 2 per cent more than was found in the control rabbit (No 25) and about 1 per cent less than in rabbit No 26, which received one-quarter the amount of glucose per kilo fed to rabbit No 28, a

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[2] Salant Am Medicine new series vol i No 1 p 41

[3] Drummond and Paton Jour Physiol., 1904 vol xxxi p 92.

[4] Doyon and Kareff Compt. Rend. Soc. de Biol., 1904 vol. lvi p 66

[5] Doyon and Kareff Ibid p 111

[6] Kaufholz Dissertation Würzburg 1904

[7] Kriukoff Dissertation Moskau 1902

[8] Garnier and Lambert Compt. Rend. Soc. de Biol, 1897, vol xlix, p 716

[9] Mohr Dissertation Würzburg 1894

[10] Koch Dissertation Würzburg 1894

[11] Kissel Centrbl f. inn Med., 1895 vol xvi p 618

[12] Luschi Jahresb ü d. Fortschr d. Thierischen, 1906 vol xxx p 340

[13] Colla Arch. Ital de Biologie, vol xxvi

[14] Pflüger Arch f. d Gesell Physiol 1902 vol xciii, p 163

The discrepancy between the results obtained in No 26, a, and in the other alcohol experiments of the same series may be explained by the following observations It was noted that in this rabbit symptoms of severe alcohol intoxication (which set in soon after the second and final dose of alcohol was given) persisted eight hours while the other rabbits of this group similarly treated behaved at the end of this time as if they had recovered completely from the effects of alcohol intoxication This difference in the reaction to alcohol is suggestive of the possibility that during the stage of profound alcohol narcosis glycogen metabolism is not affected Perhaps it is only when recovery from narcosis is practically complete that metabolism of glycogen is resumed

In the two alcohol rabbits (Nos 29, a, and 30, a), each of which was killed in a state of deep intoxication, this supposition apparently was not borne out by the results of the analysis As shown in the table, their livers did not contain any glycogen The protocols show that the intervals between two successive doses of alcohol were eighteen and twenty-four hours, thus giving sufficient time for recovery from its intoxicating effect In No 26, a, the interval was only twelve hours, which may account for the different results obtained

The suggestion that alcohol does not hasten the transformation of glycogen of the liver during the stage of profound narcosis gains further support from experiments Nos 21, a, and 23, a, in which large quantities of glucose were followed by alcohol (shortly after in one experiment or three hours later in another) The amount of glycogen found six to twelve hours after the final dose of glucose had been fed was 9 17 per cent and 8 65 per cent

It is to be noted that in both of these experiments the rabbits were killed from six to eight hours after receiving large amounts of alcohol in proportion to body weight, that is, at a time before the stage of intoxication passed off The conclusion seems to be justified, therefore that large quantities of alcohol may hasten the process by which glycerin is made to disappear from the liver and that it apparently exerts this action only after the stage of intoxication has been passed This mode of action of alcohol might explain the conflicting results of Nebelthan's[1] experiments, some of which showed disappearance of hepatic glycogen, while in some the presence of considerable amounts were reported after administration of alcohol It may in the same way also account for the different results obtained by Nebelthan and Kniukoff,[7] whose work was referred to above

Objection to this conclusion may be raised on the ground that there is a wide range of variation in the amount of glycogen found in the livers of the control rabbits Thus in experiment No 28, a, only 11 was obtained, while in No 31, a, shows the presence of 1 14 of glycogen This difference may be accounted for by the violent muscular activity when rabbit No 28 was tied on the holder before he was killed, which did not occur in the other rabbits under the same conditions Again in experiments Nos 25 and 26 (two control rabbits) there was a difference of 50 per cent in the liver glycogen found, as great a difference as there was between the alcohol rabbit in experiment No 24, a, and the control The wide variation in the amount of hepatic glycogen of these two normal rabbits does not invalidate the above conclusions, since in the alcohol rabbits of the same series, Nos 25, a, and 27, a, which received as much glucose per kilo, and were killed at the same time after feeding glucose as the controls, the livers were free from glycogen Moreover, the difference in the amounts obtained in the two normal rabbits may possibly be accounted for by a difference in muscular activity It is of importance to note, in this connection that in the alcohol rabbits intoxication and consequent loss of muscular activity set in about 15 minutes or sometimes even earlier after alcohol was administered, which would tend to inhibit rather than hasten the amylolysis

TABLE SHOWING THE EFFECT OF STRONG ALCOHOL ON THE METABOLISM OF HEPATIC GLYCOGEN

Experiment Number	Weight rabbit in gms	Weight liver in gms.	Gms dextrose fed per kilo in 24 hours	No CC of 60% alcohol fed per kilo	No hours between last feeding of dextrose and killing	Per cent. of dextrose found in liver	Per cent. of glycogen
24	1 850	51	20	0	16	4	3 70
24a	1 800	52	20	25	16	1 0	1 76
25	1 850	83	0	0	28	1 23	1 14
25a	1 550	48	8	30	28	0	
26a	1,450	58	7	28	28	3 83	3 08
26	1 120	41	5 5	0	28	2.5	2.3
27a	1,200	36	6	26	28	0	
28	1 450	30	20	0	54	0 12	0 11
29a	1 450	44	20	35	52	0	
30a	1 270	41	20	27	52	0	
31a	1 800	28	36	0	52	1 24	1 14
28a	1 230	45	25	13	30	1 44	1 33
21a	1 050	41	32	20	12	0 34	8 65
23a	815	35	25	11 7	0 11	0 07	9 17

That other toxic substances may exert a similar action on hepatic glycogen in a manner comparable to that of alcohol was shown by Roger[13] He was the first to find that anthrax has no effect on glycogen during the first stage of infection, but later accelerates its disappearance from the liver

The present study suggests certain considerations concerning the use of alcohol in infectious diseases Colla[13] who studied the influence of glycogen on resistance in infectious diseases, made the very interesting observation that increasing the glycogen of the liver and muscles in rabbits by adding glucose for fifteen days to their daily diet improved their ability to combat bacterial invasion Although his findings were later disputed by Luschi,[12] which leaves the matter an open question for the present, nevertheless the [illegible] such may be the case is of considera[illegible] resistance to infection is inc[illegible] content of the body the administration of large quantities of alcohol in infectious diseases practiced by clinicians is not an unmixed blessing, since, as is shown by my experiments, it tends to diminish the glycogen of the liver, thus possibly robbing the body of a very effective weapon to combat infection.

I am very much indebted to Prof William J Gies for valuable suggestions received in the course of this investigation

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IMPORTANCE OF EARLY RECOGNITION AND OPERATIVE TREATMENT OF MALIGNANT TUMORS

VARIATION OF THE EXTENT OF THE OPERATIVE REMOVAL ACCORDING TO THE RELATIVE MALIGNANCY OF THE TUMOR *

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Accumulated experience has demonstrated that patients from whom carcinoma and sarcoma have been removed with the knife have remained well sufficiently long to show that cures have been accomplished

There are two forms of malignant tumors, the epithelial, for which the general term carcinoma is used, and the connective-tissue tumor included under the term sarcoma

In the onset of their growth, carcinoma and sarcoma are both essentially local diseases If the neoplasms are removed in this stage cures are accomplished Carcinoma metastasizes through the lymphatic channels to the neighboring lymphatic glands Permanent cures are recorded in a certain number of cases when the primary and metastatic areas were properly and completely removed Sarcoma, as a rule, gives dissemination later than carcinoma, and generally through the blood vessels After this has taken place the prognosis is hopeless

Some forms of sarcoma disseminate through the lymphatic vessels and are associated with metastatic tumors in the neighboring lymphatic glands, like carcinoma It is a question whether cures have been accomplished in this group of tumors

The etiology of malignant tumors is not established

At the present time the only accepted treatment of neoplasms is their removal by an operative procedure Until the etiology of carcinoma and sarcoma has been determined and a new method of treatment based on this etiology elaborated, surgeons must continue to investigate the subject on the principles of early recognition and complete excision of these new growths The problems involved are 1 The early recognition 2 The method of operation

PROBLEMS IN DIAGNOSIS

In the problem of diagnosis every lesion simulating a tumor should be considered malignant until every means has been exhausted to demonstrate that it is innocent

Schonholzer divides the life of a malignant tumor before operating into three periods The first is the time during which the presence and growth of the tumor do not attract the attention of its host The second is the time which the patient waits before seeking the advice of a physician The third the time which the physician consumes in making a diagnosis The period of life of the tumor has been recorded with great accuracy in the various large surgical clinics of the world Nothing can be done to shorten the first, or latent, period As a matter of fact the relative number of cases in which the neoplasm becomes incurable or inoperable during this stage is small

To shorten the second period the public must be educated to the fact that malignant tumors are curable and that the probabilities of a cure are increased in almost direct proportion to the promptness with which they are treated In the last few years there has been a crusade against tuberculosis along these lines The knowledge of the curability of tuberculosis, its prevention and treatment has been propagated directly to the public The time is ripe for a similar educational movement on tumors For example, every woman should be instructed to seek the advice of her physician the moment her attention is called to a mass in her breast, or to any unusual change or sensation in this gland Every man should be impressed with the danger of delay in the treatment of a small ulcer, or area of hardness in the lower lip, or tongue All the people should be impressed *that the moment they notice any tumor formation,* no matter how small or insignificant, they should seek medical advice If the people can be instructed that the earlier treatment of all tumors is the most important factor in their curability, and that in this earlier stage the operation will also be less mutilating, I am confident that the percentage of cures will be tremendously increased This is clearly demonstrable in recent years in a number of surgical lesions, for example, appendicitis and strangulated hernia The public now know that the fatality of these two diseases is due chiefly to delay In some instances, greatly to the discredit of the general profession the family or the patient have carried this acute abdominal lesion to the surgeon without delay and over the advice of their family physician

To shorten the third period, the general profession must be impressed by accurate and conscientious statistical studies from surgical clinics that the truth of the statements made in this paper is unquestionable It is an improper method for the specialist, for example, the surgeon, to appeal to the public over the head of the general practitioner Future progress in surgery, in the great majority of diseases, is in the hands of the general practitioner He sees the patient first The education of the public belongs to him The general practitioner or family physician is in much closer contact with the people The specialist, the surgeon, has more than enough to train himself for the new requirements in the diagnosis and operative treatment of surgical lesions when they are brought to him in this much earlier stage

Accumulated experience in surgical lesions, especially neoplasms, demonstrates that the easier the clinical diagnosis *the worse the prognosis* By *clinical diagnosis* I mean the differential recognition of the surgical lesion from the data of the history and examination The earlier surgical lesions come to the surgeon for treatment the more difficult the diagnosis This fact brings up another problem in diagnosis which belongs strictly to the domain of surgery when a positive clinical diagnosis cannot be made as to the nature of the trouble, the question to be answered is Does the clinical history and findings at the examination justify an operation which exposes the seat of the trouble to the eye? In such cases the surgeon must have sufficient pathologic knowledge to enable him to differentiate the various pathologic possibilities by their naked-eye appearances

In this effort to improve the results of surgery the general practitioner and surgeon work together The province of the general practitioner embraces the education of the public and of himself Among a large group of patients daily seeking his advice he must be keen in the recognition of those few in whom there should be no delay in surgical consultation. It appeals to me that the general practitioner should consider this separation the most important feature of his day's work, and an intellectual achievement which gives him the greatest enjoyment His responsibility is even greater than the surgeon's

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* Read by invitation at the meeting of the Buffalo (N Y) Academy of Medicine May 1 1906

On the other hand, the surgeon must feel the responsibility of the new requirements of diagnosis, and fit himself for this task The surgeon of the future must be his own pathologist, and this transformation does not trespass on the field of the general pathologist The two should work together The surgeon brings to the pathologist his greater experience with the clinical aspects and the ultimate results of disease, and the fresh appearance of the living tissue The pathologist contributes his greater and more expert knowledge of the cellular picture In this cooperative study the surgeon improves his art of clinical diagnosis and makes more scientifically correct and acute his optical recognition of the gross differences of the various surgical lesions I am sure that the pathologist will also reap the benefit of a closer and more practical relation of his department to surgery

In regard to tumor formation, the earlier they come to the attention of the surgeon the more frequently is an exploratory incision absolutely necessary At this exploratory incision with the exposure of the diseased tissue it is essential, for the benefit of the patient, that a correct diagnosis be made at once, to be followed by an operative procedure, the extent of which is based on this diagnosis At this exploratory incision it is unjustifiable to cut out a piece of tissue for examination, to close the wound and to wait for a microscopic diagnosis

There are two methods of making the diagnosis at the exploratory incision, one, the recognition by the gross appearances, the other by the examination of a frozen section which can be made in five or ten minutes It has been my experience that when it was difficult or impossible to differentiate with the naked eye, the rapid frozen section offered no better clue With the proper training it is not difficult for a surgeon to make a gross diagnosis in the majority of cases

I can illustrate the necessity of the exploratory incision and the importance of an ability to make a naked-eye diagnosis by a consideration of breast tumors and lesions of bone In a woman with a tumor of the breast in which a clinical diagnosis of carcinoma can be made the surgeon proceeds with the complete operation without cutting into the tumor In many tumors of the breast a clinical diagnosis of carcinoma can not be made What shall be done? Shall we delay, or is the complete operation for carcinoma to be done? If one delays and the tumor is cancer precious time is lost. If one proceeds with the complete operation for carcinoma and the tumor proves benign, the patient is unnecessarily mutilated If the surgeon, however, cuts down on the tumor and has the ability to recognize its nature from the naked-eye appearances, he is prepared to follow the indications immediately If the tumor be malignant, he immediately proceeds with the complete operation, if the tumor be benign the nature of the operation differs with the character of the benign tumor, as will be discussed again under breast tumors, in some cases the tumor only is removed, in others the entire breast should be excised, in a few cases recent investigation has demonstrated that both breasts should be amputated

In lesions of the bone, even with the aid of the tuberculin test and the x-ray, a positive differential clinical diagnosis can not be made in many cases The earlier the patient seeks advice after the first symptom the more difficult the diagnosis One must always bear in mind the possibility of a malignant bone tumor The age of the patient, of value in excluding a malignant tumor of the breast, is of no aid in a bone lesion Malignant tumors of bone have been observed at all ages Extensive operations, even amputations, are indicated in some malignant bone tumors This operation is a mutilating one The same questions arise as in a doubtful tumor of the breast One is not justified in mutilating the limb of an individual unless the positive diagnosis of the disease justifies it For this reason, in these doubtful cases, one must expose the lesion for a naked-eye diagnosis It may be syphilis, in which case nothing is done, in tuberculous and pyogenic osteomyelitis very conservative operations are sufficient, in a benign bone cyst and in some forms of giant-cell sarcoma curetting is sufficient, in other bone tumors local resection with the preservation of the continuity of the limb and its function give the patient just as much assurance of a permanent cure as an amputation, in other more malignant bone tumors amputation is justifiable

Considering only tumors of the breast and lesions of bone as examples, the new problems of diagnosis and operative treatment are all involved If the public is educated to consult the general practitioner at once, and the general practitioner fulfills his obligation to the patient by immediate consultation with the surgeon, the surgeon must be prepared to meet these new requirements of diagnosis Otherwise the continuity of the scheme is broken at the most important point If the surgeon has not developed the ability to make a diagnosis in this early stage, the patient had better be left alone, those suffering with benign lesions will not be unnecessarily mutilated, and those with malignant tumors will not have the disease disseminated by an operation which consists of the cutting out of a piece of tissue and closure of the wound A delay until a positive clinical diagnosis can be made is less dangerous than treatment in this earlier stage which is based on incorrect conclusions

THE SURGEONS AND DIAGNOSIS

How can surgeons acquire this ability to recognize the various surgical lesions by their naked-eye appearances? I have ventured the statement on a number of occasions that surgical technic is in advance of surgical diagnosis One learns the technic of a modern surgical operation in the majority of cases much more quickly than one does the early diagnosis of the disease for which the operation is indicated The medical student should be instructed chiefly in diagnosis In the surgical department there should be systematic teaching on the pathologic anatomy, gross and microscopic, of all surgical lesions Every surgical clinic should have its own pathologic laboratory Cases admitted to the surgical clinic should be subjected to the most searching inquiry as to the history and the findings at the physical examination Instruments of precision and new methods of diagnosis should be employed All of these data should be carefully recorded At the present time, with these methods, in a large number of cases, probably the majority, a clinical diagnosis can be made For this reason the surgeon proceeds to the indicated operation without an exploratory incision.

After the tumor has been removed the surgeon and his associates in the clinic should make a careful inspection of the naked-eye appearance of the diseased tissue, and a clear description should be recorded; if possible, the tissue should be painted by an artist or photographed in the fresh. A frozen section should be immediately made, so that while the gross appearance is still fresh, the surgeon can quickly associate with it the microscopic pictures. A piece of the tumor should be preserved for future inspection as a museum specimen, in alcohol, or better in Kaiserling's fluid, which preserves to a certain extent the color. A block of tissue should be hardened in Zenker's fluid and as quickly as possible a permanent microscopic section should be made and examined. The daily repetition of this routine procedure establishes the continuity of the clinical picture, the gross appearance and the microscopic histology. It not only improves the surgeon's ability to make a more accurate clinical diagnosis, but he soon learns to interpret properly the gross appearances and make a naked-eye diagnosis. In this way he prepares himself and his students for those doubtful cases in which the diagnosis must be made at the exploratory incision.

For example, take a carcinoma of the breast. If the surgeon has carefully studied the gross and microscopic appearances of all the malignant tumors of the breast which have come under his observation, in which a clinical diagnosis could be made and in which the operation has been performed without an exploratory incision, he will have no difficulty in recognizing this tumor when he cuts into it, if the tumor had a clinical picture in which a diagnosis could not be made. A small scirrhus carcinoma so deep in a large fatty breast does not differ in its naked-eye appearances from the older and larger tumor in which a clinical diagnosis can be made without difficulty.

I find frequent statements in the literature that an exploratory incision into a malignant tumor is a dangerous procedure, but practically, what is to be done if the diagnosis can not be made from the history and examination? My own experience demonstrates that the danger of delay is far greater than the danger of an exploratory incision. No one is justified in mutilating an individual by an extensive operation, unless a correct diagnosis of the nature of the disease can be made which justifies this procedure. As a matter of fact, I have been unable to demonstrate any cases of dissemination when the exploratory incision has been properly made into a doubtful malignant tumor, provided an immediate operation followed.

In malignant tumors of the breast, considering all cases, 47 per cent. of the patients have remained well and free from recurrence three years after operation. When we consider the malignant tumors of the breast in which a clinical diagnosis could not be made in the surgical clinic of the Johns Hopkins Hospital and in which an exploratory incision was performed, there has been but one death in 25 cases. That is, 96 per cent. of the patients have remained apparently well 3 years, some, 14 years. In this one patient who died of internal metastasis the tumor was a small scirrhus carcinoma, and the glands in the axilla showed metastasis. The latter finding can explain the internal dissemination better than the dissemination by the exploratory incision. In the majority of bone tumors which have been cured, exploratory incisions were made. Exploratory incisions were necessary in only a very few of the cases of bone tumors in which the patients died later of internal metastasis.

I believe I am justified by the facts in the statement that the earlier surgical lesions, especially tumors, come to the surgeon for treatment, the more frequently will an exploratory incision be necessary, and that this exploratory incision is less dangerous than delay or an operative procedure without it; further, that surgeons must acquire the ability to recognize surgical diseases by their naked-eye appearances. Undoubtedly, the investigation of surgical lesions along these new lines will develop in the surgeon an increasing power in correct clinical diagnosis, and decrease the number of exploratory incisions into malignant tumors.

WORK IN THE SURGICAL PATHOLOGIC LABORATORY OF JOHNS HOPKINS HOSPITAL

More recent clinical and pathologic study of tumors has demonstrated that malignant tumors, both sarcoma and carcinoma, vary in the relative degree of their malignancy. This knowledge allows in some cases a less radical, local operation, and in all cases is of great interest in prognosis. The results of the clinical and pathologic study of tumors in the pathologic laboratory connected with Professor Halsted's clinic of the Johns Hopkins Hospital can be expressed in the following paragraphs.

First, I wish to record my obligation to Dr. Halsted for the opportunities, the introduction to which I owe to his suggestion and association. The laboratory connected with his surgical clinic was started by me in May, 1892, nearly fourteen years ago, and at the present time we have records of almost 8,000 cases. It has been the rule of the laboratory to associate with every specimen received its clinical history, and as far as possible to record from year to year the ultimate condition of the patient from whom the specimen was removed.

At the present time the clinical and pathologic investigations have been published in a series of pamphlets which are now used for teaching purposes. In *Progressive Medicine* for December of each year from 1899 to 1905, material from the laboratory has been used and illustrated for the discussion of the more recent literature. During the past year I have begun a publication of short monographs. Papers on "Thyroid Cysts" and "Thyroid Adenoma" have so far appeared in the *Journal of Surgery, Gynecology and Obstetrics*. I trust to be able to continue this from time to time.

Epithelial Tumors. In an investigation of some 900 cases of epithelial tumors of the skin and mucous membrane I found that Krompecher's classification into two great groups, the epithelioma basocellulare and the epithelioma spinocellulare is of great practical importance. The epithelioma basocellulare is of a relatively low grade of malignancy. It occurs most frequently on the skin of the face, nose, forehead and upper lip. It has little or no tendency to metastasis. Local excision is sufficient. When the tumor is small and situated on the alæ of the nose or an eyelid, positions where complete excision would produce some mutilation, an *x*-ray treatment is justifiable, as there is no harm in this delay, and in some cases it has been successful, while so far in my experience complete local excision of the tumors which have not disappeared under the *x*-ray treatment has also been invariably successful. The epithelioma spinocellulare is a much more malignant tumor. Its most common situation is on the lower lip. In these cases not only should the tumor be removed by a wide local excision, but the entire lymphatic glands beneath the jaw, from parotid to parotid, should be excised

Space forbids further details, but it is of the utmost importance for the public to be educated and the general practitioner to be keen in their attitude to small and apparently innocent warts, nodules, scabs, ulcers and little areas of induration on the mucous membrane of the lower lip, tongue and mouth, skin of face, in an individual over thirty Many of these represent the early stage of the malignant epithelial tumors and when completely removed in this early period, permanent cures are accomplished in the majority of cases Permanent cures are recorded in epithelioma of the tongue and lower lip when the glands removed have shown areas of metastasis

But the relative number of such cures is small I have two cases in which second operations were performed for the removal of metastatic glands lower down in the neck These patients are well three and seven years since the first operation Future progress, however, in these tumors depends more on early treatment than an extension of the radical neck operation Ability to recognize the different forms of epithelial tumors allows the surgeon to restrict or extend the operative procedure according to the malignancy of the primary growth I have a record of a few cases in which the penis has been amputated for a benign epithelial wart, cases in which a local resection with the preservation of the organ would have accomplished a cure just as well In many epithelial tumors of the penis the glands in both groins should be removed, and permanent cures have followed even though the glands showed metastasis

Sarcoma of the Skin and Soft Parts In the records of the pathologic laboratory and in the literature I have been unable to find a permanent cure in the pigmented alveolar sarcoma arising in a congenital pigmented mole The time to remove this mole is in its benign state Practitioners should be on the lookout for congenital moles and advise their immediate excision I believe it would well repay if a hundred such moles were removed in order to save one patient from death due to malignant degeneration The congenital nevus is less likely to be the seat of a sarcoma later in life The resultant tumor, however, the perithelial angiosarcoma has a high grade of malignancy and cures are rarely accomplished The benign single fibroma of the skin or one of the tumors in fibroma molluscum may later in life become a sarcoma In view of these facts the general profession should change their attitude toward the so-called congenital and acquired, small and innocent tumors of the skin The time for their removal is in their benign state

Sarcoma may be divided into two great groups, the angiosarcoma and the simple sarcoma Angiosarcoma arises from the endothelium of the blood or lymph vessels (endothelioma), or from the cells in the outer walls of these vessels (perithelioma) These tumors are very malignant Cures are seldom accomplished Now and then we observe endothelioma of a relatively low grade of malignancy and a few cures have been recorded Simple sarcoma arises from the fixed connective-tissue cells It varies in its cellular picture from a fibro-spindle-cell fibrosarcoma to a pure round-cell sarcoma The greater the number of round cells the greater the malignancy of the tumor Simple sarcoma showing myxomatous degeneration or containing numerous giant cells has a relatively low malignancy

When we have a tumor situated in the soft parts beneath the skin it is impossible, in the majority of cases, to make a correct diagnosis in the early stage The possibilities are too numerous to mention. It may be one of the various benign connective-tissue tumors, fibroma, myxoma, angioma, lipoma, a rare lymphatic cyst, or some inflammatory lesion of the muscle The correct diagnosis as a rule can be made at the exploratory incision This pathologic knowledge allows an operative procedure according to the nature of the tumor, patients are not unnecessarily mutilated, and are given the best assurance of a permanent cure I am confident that amputation is often unnecessarily performed for many of these lesions

Bone Tumors There is no more interesting field than this subject, and perhaps in no other place is the correct diagnosis of the lesion of more importance to the patient In recording the ultimate results of all the bone tumors studied in the pathologic laboratory I was struck with a very important fact. In certain varieties of sarcoma not a single cure had been observed These tumors were spindle and round-cell, periosteal or medullary sarcoma —tumors which produce rapid bone destruction and are associated early in their growth with pathologic fracture In spite of amputations at the highest point these patients died of metastasis The duration of life was seldom longer than two years from the onset of the first symptom In the other varieties of sarcoma and bone tumors permanent cures were almost invariably accomplished For example, the benign bone cyst, the periosteal and medullary giant-cell sarcoma, the periosteal ossifying sarcoma, the periosteal fibrosarcoma, and the medullary myxosarcoma In the benign bone cyst and in the medullary giant-cell sarcoma in which there is still a thick shell of bone, curetting is sufficient In the other forms local resection will accomplish a cure, apparently just as certainly as amputation at the highest point One amputates the limb only when the local growth has been so extensive that its removal would leave an extremity without function

When these various tumors can not be recognized from the clinical picture or the *x*-ray it is not difficult to make a correct diagnosis at the exploratory incision This should be done under an Esmarch bandage As a matter of fact the gross appearance of the different bone lesions is distinct These various tumors, solid and cystic, syphilitic, tuberculous and pyogenic osteomyelitis, all have a gross pathologic anatomy not at all difficult to interpret when exposed to view The *x*-ray is the most important aid in the clinical diagnosis It is of the greatest importance, not only for the life of the individual, but for the saving and function of his limb, that these bone lesions be recognized early Local pain referred to a bone should always be regarded as suspicious and an *x*-ray negative immediately made Too often such cases are called rheumatic and treated with drugs and massage, until the definite swelling or pathologic fracture forces the recognition of a serious lesion which should and could have been recognized before

In tumors involving the upper and lower jaw the same principles apply as to early diagnosis and operative treatment The epulis is a relatively benign lesion and can be treated by a local excision In very early cases I believe it is justifiable to attempt to save the teeth The adamantine epithelioma arising from the epithelial enamel plate is a tumor observed only in the jaws I was surprised at the permanent cures and in the future, I am convinced [illegible] ra [illegible] rocedures [illegible] mployed in their removal In the benign dentigerous cyst excision is never necessary In the more malignant sarcomas involving the upper and lower jaw, the spindle and round-cell sarcoma, mentioned before, cures have not been accomplished by the most radical and mutilating operation In the other varieties, if the patients come for operation in the early stage, local resection is sufficient In many cases the continuity of the lower jaw can be preserved In tumors of the upper jaw the hard and soft palate need not always be removed Time forbids further detail If the surgeon familiarizes himself with this pathologic knowledge, he will be able to give his patients with jaw tumors just as much assurance of a permanent cure, and in the majority of cases accomplished with very little mutilation

The most distressing results are those in the so-called carcinoma of the upper jaw These tumors may arise from the mucous membrane of the antrum or nose, or from benign polypoid growths in the nares. I was unable to find a permanent cure in any case recorded in the laboratory The majority of these give a history of nasal polypi of many years' duration, and usually a history of one or more operations through the nose I am impressed that future progress in the treatment of these jaw tumors rests with the rhinologist He should train himself to recognize that form of nasal polypus which has a tendency to become a carcinoma, and institute at once more radical measures for its removal in the early stage

Thyroid Tumors Thyroidectomy in exophthalmic goiter is performed for the alleviation of the general symptoms due to the excessive or pathologic secretion of the thyroid gland In simple goiter the tumor is removed to relieve the patient from the discomfort of its size or from pressure symptoms The asymmetrical tumors of the thyroid are cysts and adenomas In the experience of the laboratory and in surgical literature very few permanent cures are recorded after the removal of malignant tumors of the thyroid When these cures have been accomplished the primary tumor could not be differentiated clinically from a benign cyst or an adenoma For this reason, in an individual over thirty every asymmetrical tumor or nodule in or near the thyroid gland should be regarded as suspicious and immediately removed If it prove to be a benign adenoma or cyst, the patient is relieved of a tumor which later would probably have to be excised on account of increasing growth On the other hand, if it prove to be a carcinoma the patient is given the best chance of a permanent cure

Parotid Tumors The so-called mixed tumor in, or in the neighborhood of, the parotid or salivary glands, is a benign tumor, encapsulated and of slow growth It should always be removed, but it is unnecessary to sacrifice the facial nerve This nerve can usually be dislocated from a groove in the tumor In the malignant tumor of the parotid gland I have never observed a permanent cure Unfortunately, all of these cases came to the surgical clinic late

Breast Tumors I believe the facts justify the statement that every single tumor in the breast of a woman over twenty-six should be immediately subjected to operation If a clinical diagnosis of a carcinoma can be made, the breast, an area of skin, both pectoral muscles, and the axilla should be removed in one piece If the higher axillary glands are involved a complete dissection of the fat and glands in the supraclavicular fossa should be done. If a clinical diagnosis of a malignant tumor can not be made, the tumor should be exposed at once by an exploratory incision If the tumor proves malignant, the wound should be burnt with the actual cautery or pure carbolic acid, and the complete operation immediately performed It is not difficult to recognize the encapsulated benign tumors the intracanalicular myxoma, the less frequent adenofibroma, and the rare cystic adenoma In these cases one removes the tumor with a small zone of surrounding breast

If the exposed tumor proves to be a cyst a differential diagnosis is of the greatest importance If the cyst has a thin wall, a smooth surface, and non-hemorrhagic contents, and the surrounding breast is normal, excision of the cyst with a small zone of breast tissue is sufficient If the cyst contains a papilloma, the entire breast should be removed It is important to remember that the papillomatous cyst may contain blood. This is not an indication that the papilloma is malignant About 50 per cent of these cysts with intracystic papillomatous growths are malignant, however The malignant infiltration takes place at the base of the papilloma This area should be exposed. If there be any doubt as to the benignity, I should advise the complete operation for carcinoma Every smooth-walled cyst containing blood has proved to be a cancer cyst For this reason, if the explored cyst contains blood and no papilloma, immediately perform the complete operation for carcinoma Thick walls, smooth cysts, with cheesy or very granular, non-hemorrhagic contents, are usually cancer cysts, and should be subjected to the complete operation

The most difficult problem in breast surgery is the recognition of senile parenchymatous hypertrophy, known under the names of Reclus' or Schimmelbusch's disease, adenocystoma, cystic disease of the breast, abnormal involution This lesion presents itself as an area of induration. At the exploratory incision one finds in the indurated quadrant of the breast areas of increased parenchyma, numerous minute cysts, and little cavities filled with a granular material It is my opinion that the entire breast should always be removed, as the disease is very likely to be bilateral, recently I have removed both breasts The lesion has a strong tendency to become a carcinoma If the surgeon has any doubt as to the stage, I believe it would be better for the patient that the complete operation for carcinoma be performed The larger and the more numerous the cysts in this disease, the less the probability of a malignant infiltration. In some cases in which there are multiple simple cysts, I believe the plastic resection of two or more cysts, as advocated recently by Warren of Boston, is justifiable It saves the patient the mutilation of the removal of the breast

The general practitioner has the new responsibility of bringing patients to the surgeon with tumors of the breast the moment they are observed, and the surgeon must prepare himself with this pathologic knowledge which will allow him to treat the non-malignant tumors of the breast without mutilation, and to give the malignant tumors of the breast the most extensive operative removal

The relative degree of increasing malignancy is well illustrated in carcinoma of the breast As stated before, in all tumors 47 per cent remained well three years In the comedo-adenocarcinoma, a basal-cell duct cancer, the probability of a cure is 97 per cent., while in the cancer cyst and in the large infiltrating scirrhus it is only 20 per cent In the less malignant cancer of the breast there is frequently no metastasis to the axillary glands At the present time I can see no justification for restricting the operation for carcinoma of the breast The same extensive excision should be performed in all cases The time, however, may come when our knowledge will allow us to perform a less radical operation in the early stage of the less malignant tumors of the breast.

Carcinoma of Stomach and Uterus There is one other problem in the operative treatment of tumors, exemplified in the present-day attitude toward carcinoma of the stomach and the uterus I believe it has been established that an exploratory laparotomy is justifiable on any patient in whom there is the slightest suspicion pointing to a carcinoma When the stomach is exposed pylorectomy should be performed for every definite malignant tumor, if it is possible, and this should also be done for every doubtful indurated mass in the stomach wall This pylorectomy consists of the removal of a small portion of the duodenum and a portion of the stomach including the entire lesser curvature with its glands, and a certain portion of the larger curvature with its glands The more radical removal of the stomach and especially the more radical dissection of the glands which may be possibly infected in carcinoma, although theoretically correct, has been abandoned by the majority of the surgeons because the mortality of this more extensive operative removal is so great and the possibility of a cure, if metastasis has taken place to such a wide extent, is too small

The presence of hemorrhage from the uterus, which can not be explained by the menses, is now considered by gynecologists an indication for curetting and the microscopic examination of the material removed In the operative treatment of carcinoma of the uterus the more extensive dissection of the broad ligament and the removal of the various lymphatic glands from the pelvis, has such an increased mortality, and the probabilities of a cure when these glands are involved are so slight, that the majority of gynecologists of to-day do not believe that this more radical operation is justifiable That is, in some forms of tumors, if the lymphatic glands are involved, the more radical removal of the possible lymphatic involvement should be restricted, if the mortality of the operation is greater than the possibility of a permanent cure

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THE THERAPEUTIC USES OF THYROID PREPARATIONS *

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Unfortunately, we are not much farther advanced in the chemistry of the thyroid gland than we were two years ago when I wrote the section on organotherapy for Cohen's "System of Physiologic Therapeutics" In other words we can not give any one portion of this gland activity to a patient without giving the whole of it We know that the active principles are absorbed from the gastrointestinal canal, but whether any particular activity is lost in this chemistry we do not know

The physiologic symptoms developed by feeding thyroid are well known, viz, thyroid extract will increase the rapidity of the heart, increase perspiration, cause warming of the surface of the body, in other words increase the peripheral circulation, lower the blood pressure, stimulate mental activity even to sleeplessness, cause increased nitrogenous metabolism, and if in considerable amount or given for a time, cause loss of weight. The physiologic actions of the gland we know We know the counterpart of feeding this gland, namely, the symptoms of Graves' thyroid disease We are perfectly familiar with the symptoms of absence of function of this gland as seen in myxedema and cretinism

I have said so many times during the last five or six years that we must take into account the varying degrees of the activities and functions of this gland as almost to feel ashamed to repeat it, viz, that all varying increased secretions of this gland will give symptoms, and all varying decreased secretions will give symptoms With a fully developed exophthalmic goiter with all the attending symptoms at the top of the line, and with normal secretion and function in the center of the line, there may be all variations of tachycardia, hot flashes, profuse sweatings, nervous irritability, restlessness loss of weight, profuse menstruation, neurotic tendencies, and hysterical phenomena of all kinds While at the bottom of the line, at equal distance from the center as is the exophthalmic goiter above, is myxedema, and between the center of equilibrium and myxedema are such conditions as connective tissue formations, arteriosclerosis, slow heart, high blood tension, obesity, diminished menstruation, toxemias as seen in uremia, and probably some blood disturbances

The thyroid gland is easily excited temporarily to increased secretion by emotion, grief, sexual excitement, and for a more prolonged period during menstruation and pregnancy It is thus seen that the thyroid is a much more active and necessary gland in women than in men, and in fact nearly three-fourths of all cases of disturbed thyroid secretion, either more or less than normal, occur in women The nervous, excitable, irritable girl at puberty is so because this gland is in an unstable condition It is often either over-doing or under-doing its normal functions The profuse menstruation of young girls is largely due to excessive activity of this gland, whereas under-activity of it gives amenorrhea and often chlorosis, and many times chlorosis is as successfully treated with small doses of thyroid as with iron and in amenorrhea nothing in the whole Pharmacopeia is, in my opinion, at all comparable to the action of thyroid On the other hand, in girls with profuse menstruation I have often found mammary extract very efficient in combating the flow, and physiologically when the mammary gland is functionally active menstruation is generally in abeyance

Again, this emotional gland is over-secreting in various hysterical manifestations of women, and this is largely the cause of the nervous wrecks we see from excessive venery in young women, and its enlargement may have something to do with the typical hoarse voice Later, this gland, if over-worked, like any other overworked gland of the body, is likely to cease its function and to become atrophied, largely due to connective tissue formation, the symptoms of under-secretion develop, more evident in women than in men, as evidenced by almost always the laying on of fat after the menopause The thyroid has been found degenerated in adiposis dolorosa, and I have benefited such cases by feeding thyroid

As age advances, from fifty on, the thyroid normally begins to secrete less than at earlier ages Vasomotor tension therefore increases, arteriosclerosis develops, and we have normal old age, viz, arterial disease, and with it all the phenomena of connective tissue deposits Finally, as the gland more and more diminishes its secretion, senility develops, the skin becomes dry, and eczemas may occur, and these eczemas are improved by the administration of thyroid The nervous excitability of our present lives leads to the over-stimulation of the thyroid, and with nervous tension, strain and alertness, causes men to have arteriosclerosis and its phenomena earlier than formerly

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* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Fifty-seventh Annual Session, June 1906

One more fact must be taken into consideration, viz, that any gland may have its chemistry so disturbed as to offer a *perverted* secretion, perhaps neither too much nor too little as a whole, but with its various elements in an abnormal relation to each other This is doubtless the reason that in some cases of hemophilia thyroid feeding has been successful, while in other cases it has made the condition worse

The thyroid, I believe, has something to do with the production or destruction of the red blood corpuscles I have seen patients with chlorotic anemia have their blood counts improved under thyroid I have seen cases of epistaxis and uterine hemorrhages in stout, overweight women, with slow pulse, in which this bleeding was stopped by thyroid On the other hand, thyroid, as above stated, will make stout, over-weight women who have amenorrhea menstruate, and thyroid will make normal women menstruate more profusely

The thyroid also has something to do with sugar metabolism Glucose has many times appeared in the urine when thyroid treatment has been pushed, and I have seen cases of diabetes in which the sugar output greatly increased under thyroid treatment Myxedema has often been complicated with diabetes, and diabetes has often been an accompaniment of acromegaly, in which disease the thyroid is always diseased Cretins have developed diabetes under thyroid treatment

Besides the physiologic and psychic stimulations of the thyroid gland, certain drugs affect it Alcohol excites it, and iodin, in any form, is a stimulant to it Arsenic, I believe to be a stimulant to it, and this is doubtless the reason that arsenic does good in chlorosis Phosphorus is probably a stimulant to it Prolonged actions of such metals as lead and mercury, I think, inhibit the action of the thyroid This is doubtless one of the causes of the connective tissue formations which can occur (due to diminished thyroid secretion) as the sequelæ of a long, previous mercury-treated syphilis Possibly, some of the efficiency of the iodid in syphilis is due not only to the liberation of mercury from the tissues and perhaps thus to remercurialize the patient, but also to the stimulant action of iodin on the thyroid gland Other drugs which I believe diminish the secretion of the thyroid are strophanthus, bromids, atropin and lime, as perhaps best administered in the glycerophosphates

It is interesting to note that Lanz[1] reports that he has found that dogs, cats, goats and hens are usually unable to procreate after thyroidectomy He has also observed the same effect in two human subjects One was a man, who was apparently deprived of all sexual functions by complete removal of the thyroid gland Thyroid administration, however, was followed by the gradual restoration of the function The other was a woman The menses reappeared under thyroid treatment after they had been entirely suspended by thyroidectomy

There is more iodin in the thyroids of people living at the seashore and in people living in the goiter regions than elsewhere There is more at maturity than in youth or old age In cancer the iodin is increased, but it is found decreased in infectious diseases and tuberculosis[2]

An excessive meat diet modifies the structure and hence the secretion of the thyroid This has been noted by Watson,[3] and I believe is a fact Certainly, when there is much hypersecretion in exophthalmic goiter the patient is much better on a diet without meat.

PARATHYROID GLANDS

A discussion of thyroid physiology is not complete without reference to the parathyroids Doubtless some of the symptoms of thyroid extirpation are due to concomitant extirpation of the parathyroids Also it is possible that some of the *preparations of thyroid are contaminated* with extracts from parathyroid Even in pathologic conditions it is quite possible that diseases which we have considered due to decreased or increased secretion of the thyroid, may really be due to disturbances of the parathyroid secretion Careful investigation of the pathology of these glands as a routine procedure in every case of autopsy in which their removal can be accomplished, is the only way to enlarge our knowledge of their functions

The number of parathyroids in animals varies considerably, if all are removed the animals die in convulsions, and MacCallum states that removal of the parathyroids alone will cause, in a few days, twitching of the muscles, sometimes spasms, incoordination and partial paralysis of the legs, dyspnea, and finally death from exhaustion He thinks that the cause of these symptoms are toxins circulating in the blood due to the absence of parathyroid secretion Tetany may be due to a disturbance of the parathyroids Exophthalmic goiter, myxedema, and cretinism are probably not caused by disturbances of the parathyroid

Parathyroid extracts have been used with success in eclampsia, and Berkeley[4] has used it with considerable success in paralysis agitans

THERAPEUTIC USES

It is unnecessary to discuss the successful use of thyroid preparations in cretinism and myxedema In ordinary goiter I believe thyroid extract will often do harm by stimulating the gland to increased secretion and perhaps causing the exophthalmic form to develop from a simple goiter If the goiter consists largely of cystic degeneration, small doses of thyroid may be physiologic, while large doses have seemed in some instances to cause goiters to decrease in size However, I believe an iodid will do as well and much more safely In other words, I do not believe that it is good treatment to give large doses of thyroid in goiter

In exophthalmic goiter thyroid is positively contraindicated It will always aggravate the symptoms In cases in which the disease is not typically developed, some symptoms present and some not, with certain kinds of symptoms absent thyroid might be given, as there is probably in these cases a perverted thyroid secretion Cases of exophthalmic goiter reported to have been improved by thyroid were probably at a period when the thyroid began to diminish its secretion and the case was naturally curing itself And we know that under many treatments exophthalmic goiter often tends to recovery

In doubtful cases of nervous phenomena where the question is whether thyroid will help the case or make it worse, I believe the following symptoms are against the use of thyroid Cerebral excitement, palpitation, progressive loss of weight, sweatings, and flushings If, on the other hand, the patient is drowsy, apathetic, gaining weight, and the pulse is rather slow, thyroid may be of benefit. If a case is doubtful, a few days of thyroid feeding may aggravate unpleasant symptoms so much as to contraindicate its further use There can be no doubt that the proper treatment of exophthalmic goiter is one of the antithyroid preparations or serums These preparations certainly antagonize the thyroid hyperactivity I am not yet sure of the dose, or whether such treatment can be pushed or prolonged with safety

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[1] Arch f Chir Langenbeck's, Berlin 1904 vol lxxiv No 4

[2] Mitteilungen a d Grenzgebieten d Med u Chir Jena, vol xv Nos 3-4

[3] New York and Phila Med. Jour May 6 1905

[4] New York and Phila Med Jour, Dec. 10 1905

In severe exophthalmic goiter we should consider the removal of a portion of the thyroid gland The danger from this operation is much less than was supposed

Obesity is well treated by small doses of thyroid long continued Large doses, I believe, are dangerous, and should not be used Small doses, from twenty to thirty centigrams of the dried gland, two or three times a day, are generally sufficient This treatment is especially valuable in obesity in young people, and especially in young women under forty, who have scanty menstruation and at the same time are growing obese After the cessation of menstruation, when all menopause symptoms have disappeared and the weight is increased more than seems normal, thyroid will often be of value This is no myth I have seen case after case in young women with scanty menstruation, or amenorrhea, becoming obese, especially on the abdomen and around the breasts, and oppressed for breath, in which this feeling of fullness was rapidly ameliorated, some of this extra weight removed, and menstruation began after several weeks of thyroid treatment. If, at any time, during the administration of thyroid, palpitation or muscular weakness occurs, too much is being given

When perspiration is nearly absent and the skin dry and scaly, whether occurring in infancy or in old age, small doses of thyroid are valuable

In high blood tension after fifty I have seen marked benefit from the prolonged administration of small doses of thyroid, and the same is true in the asthma of old age

I have now on my records a number of cases of epilepsy treated successfully with thyroid My attention was first drawn to the use of this preparation in epilepsy by several cases occurring in women at the time of the menopause, the attacks showing a suggestive periodicity In several other cases in young girls at the time of puberty the attacks showed a periodicity There being no assignable lesions or injuries in these cases to account for the epileptic attacks, I reasoned that they must be purely toxic, and that this toxemia was in excess periodically when the patient should have menstruated

Many of these patients had received bromids, and while this postponed or controlled the epileptic attacks, general debility and bromism were appearing In the young girls I used thyroid as an emmenagogue with the belief that normal menstruation would prevent the attack of epilepsy I found that it did I then used the thyroid in the menopause cases, in some continuously in small doses and in others a few days a month at a possible menstrual epoch I found that I could control and prevent the epileptic attacks as well with thyroid as could be done with bromids and with much better results to the system

I have also used thyroid with success in major epilepsy and in petit mal in women who menstruated apparently normally, and in one or two young boys One boy I am now treating was almost mentally ruined with bromids He is now apparently well, having had but one major attack in several months, and the attacks of petit mal, of which he had numbers a day in spite of enormous doses of bromid, have but rarely occurred This boy is mentally in perfect condition Certainly any treatment that does not necessitate the use of pernicious drugs of the bromid type is a success

One especially interesting case of toxemia is the following

A young girl, 16 years of age, who lived about 50 miles from New Haven, and for whom physicians in all the neighboring cities had been consulted, had menstruated regularly for a time and then ceased, and periodically once a month had an attack, starting with a severe headache, of coma or profound sleep This had been known to last as many as five days, during which time she could hardly be aroused, though she could be made to drink water and to pass urine occasionally After gradually coming out of this profound stupor, which lasted from three to five days, for a while she could not see, and for several days could not hear, when she began to see she did not recognize her own clothing and trinkets, and could not talk well for days In a week she would recover and be pretty well until the next cycle. This had been going on for about eight months, the duration of the stupor and subsequent prostration gradually increasing and the amenorrhea continuing She had never had a convulsive attack. She was then brought to me The problem seemed to be one of periodic intoxication, and I consequently gave her thyroid She never had another sleeping turn, but the next two months had typical convulsive epileptic attacks From that time to this, three years, she has never had another attack, and has menstruated regularly, although after having stopped the thyroid for some weeks she was frightened by having rather severe headaches again at the menstrual period and came to me to see if she must still take the thyroid. She is now 19 years of age, and has been married a year, and seems to be perfectly well, although I believe of her own initiative she occasionally takes the thyroid.

Her mother, who was a very well woman, 42 years of age, strong and robust, had an attack of some kind of rheumatism, in which I did not see her and for which I did not treat her At the end of this attack she had an eruption of petechiæ and hemorrhagic spots all over her lower extremities, with excruciating lumbar backache, and some blood in the urine Knowing the daughter's history, knowing that these thyroid disturbances are hereditary, and noticing that the mother was growing stout, I gave her thyroid. The eruption rapidly disappeared, although it had been treated with many other drugs for several weeks without success She has been well ever since

Reasoning from this analogy of toxemia irritating the brain, and knowing of the successful use of thyroid in puerperal eclampsia, I have used it a number of times with success in uremic convulsions One patient with acute nephritis with uremia I have seen recover and have no further convulsions after the thyroid was begun Of course, the patient might have recovered without thyroid In several cases of chronic nephritis with uremic convulsions I have seen the convulsions cease and remain absent until the patient finally died, after some days, the thyroid having apparently prolonged life In these cases there were no more convulsions

Owing to the frequent number of deaths from uremia that I have lately seen without albumin or but little albumin in the urine, some without any casts whatever at the time of the uremia, I think we are compelled to believe that there is internal secretion of the kidney which, being absent, allows uremia to take place Whether or not water or solids in sufficient amounts are passed whether albumin is present or absent and whether casts are present or absent in these cases of toxemia or uremia I am sure that thyroid does good Of course, it can not cure the condition, but it seems to prevent the toxemia that causes convulsions, and even wards off, for a time, the coma I have also seen thyroid apparently aid in saving a week-old babe that had very frequent convulsions, the symptom record showing that he had had 178 in a week The child recovered

I think we need no better proof of the antitoxin or opponent to toxins that the thyroid secretion furnishes We believe that nitrogen intoxication or ammonia formation has something to do with the production of uremia, and therefore thyroid must have some beneficent action in nitrogen metabolism.

It has also been found that in disturbances of thyroid in exophthalmic goiter, a vegetable diet and the withdrawal of meat are advantageous I believe that whenever there are many nervous symptoms, headaches, vomitings, and especially if the kidneys do not do perfect work during pregnancy, that thyroid should be given in small doses as a preventive of eclampsia If the thyroid is not furnishing increased secretion as it should during pregnancy, the mother's blood may be unable to neutralize the toxins of the double metabolism

I believe that it would be advisable to feed thyroid in puerperal insanity, and in the insanity occurring at the menopause Whether it would be beneficial or not, I have no data to decide

I realize that a paper limited to twenty minutes on a subject that is so largely argumentative is hardly sufficient to bring the subject before you for discussion, but I trust I may have created at least some interest

DISCUSSION

DR. S SOLIS COHEN, Philadelphia, said that he wished that he could think with Dr Osborne that uremia is due to a failure of internal secretion on the part of the kidney Its pathology, he feared, is much more complex. The value of thyroid substance in preventing uremia is apparently due to two factors, its destructive influence, probably indirectly exercised on nitrogenous products of a toxic nature, and its directly stimulating influence on the functionating cells, the excretory cells of the kidney He had published some observations showing that thyroid gland administered to a normal man will increase the output both of urinary water and urinary solids, and especially of urea Chemists declare that clinical methods can not be depended on, but they are sufficient to indicate relative values, and Dr Cohen is satisfied that thyroid increases the output of nitrogenous substances in the urine by stimulating the essential kidney cells and by increasing nitrogenous katabolism in general In this manner it probably destroys toxins hence its value in uremia and epilepsy Another therapeutic virtue of the thyroid gland which is not very well known is its value in arteriosclerosis The cretin, the child with deficient thyroid secretion, is born an old man, the changes of myxedema are in large measure those of old age, exaggerated and caricatures, associate with these facts the diminished activity of the thyroid gland at the time that the arteries begin to degenerate, thus realizing that normal old age is concomitant with the loss of thyroid function, further, recall the antagonism between thyroid and adrenal substance and the arterial degeneration produced by adrenal poisoning and we find an exact, scientific, physiologic and evolutionary basis for the use of thyroid substance to retard the changes of premature, pathologic old age How much of the arteriosclerosis seen is pathologic and how much physiologic is, of course, a difficult question to determine, but in many cases of arteriosclerosis coming on prematurely and even in cases in which fibroid change in the vessels comes on in the normal course of events without any special toxic factor such as syphilis or gout or lead or alcohol the use of thyroid substance will hold the process in abeyance and relieve many of the severe symptoms Thyroid gland acts very much like an iodid combined with a nitrite Sodium nitrite with sodium iodid will give the same pharmacologic effects, not in all respects, but in very many respects, as is obtained from the thyroid gland and, if this be remembered, he thought that very many of the uses of thyroid would be, at least empirically, accounted for The fundamental physiologic explanation remains and depends on the work of physiologists and physiologic chemists in revealing the rôle of this very important function in the human economy

DR W J ROBINSON, New York City, said that when thyroid was first brought to the notice of the profession it was lauded extravagantly It was to revolutionize medicine That is a misfortune. Often when a new therapeutic measure is launched the profession think because it is good for one disease it must be good in everything He remembered distinctly when thyroid extract was first brought into notice on account of its beneficent action in cretinism, it was claimed to have an extraordinary effect in dermatology Some very enthusiastic physicians claimed it to be a specific in psoriasis At present its use is very limited in dermatology It is not used in any disease except psoriasis and in that disease it has been found no more useful than arsenic in small doses It seems to aid in removing patches of psoriasis but does not prevent recurrences as it was believed at one time to do There is one disease in which it has a special effect, senile eczema, probably because it improves in general the circulation and not because of any specific action on the eczema

DR A C CROFTAN, Chicago, approved of Dr Osborne's conservative position Aside from its wonderful effect in myxedema the action of thyroid gland is uncertain in any other disorder The use of thyroid gland in uremia is not altogether irrational, although in a disease, or better, a syndrome of manifold origin, like uremia, with spontaneous intermissions and remissions, it is difficult to estimate the value of any therapeutic method. Uremia is more a metabolic disorder than an intoxication due to retention of urinary bodies, thyroid given by the mouth must act, if at all, through some influence it exercises on the metabolism As it is a dead product, the administration of thyroid can only be considered a substitution therapy and its action must of necessity be transitory in character and must disappear as soon as the supply of thyroid is eliminated from the body, in any case, therefore, thyroid could only be imagined to be a palliative but not a curative agent in uremia

Provided it is given in sufficiently large doses thyroid extract can cause a reduction of flesh But he believes its use to be always dangerous and generally superfluous in the reduction of obesity if the quantitative method of treating this disorder be adopted, viz, reduce the caloric intake of the patient so as to produce a caloric deficit, restrict liquids, promote free catharsis and advise abundant exercise Thyroid extract in the beginning of a reduction cure is often of value because most obese people desire to lose flesh rapidly If this can be accomplished, i e, if they can lose 5 to 6 pounds during the first week, they are generally willing to follow dietetic and other restrictions for a considerable time thereafter because they have acquired confidence in the ability of the physician to really reduce flesh This initial loss of flesh can very well be produced by thyroid, but equally as well by drink restriction The indiscriminate use of thyroid by the laity is to be condemned as dangerous, especially in young individuals Dr Croftan has seen two cases of obesity in young girls who took thyroid extract to reduce flesh, they succeeded only too well in doing this and have never regained the freshness of complexion nor the youthful spirits and vigor they exhibited before That dangerous heart seizures follow over use of thyroid is, of course well known

DR JOHN ROGERS, New York City, said that he has been surprised to find patients turn up with simple goiter who had been given thyroid tablets to do away with goiter, and who later developed exophthalmic goiter In some cases exophthalmic goiter has been superimposed on a simple goiter and it has not disappeared with thyroid feeding Very seldom did he see the danger of exophthalmic goiter following thyroid administration mentioned and he called attention to this danger, which he thought a real one He had seen several cases that had a pretty straight origin in that way

DR. A W BAER, Chicago, said that thyroid is too dangerous a medicament to be used indiscriminately and Dr Osborne's paper would occasion a little more use of thyroid than there has been in some cases in the past Dr Baer said that the patient who is taking thyroid extract should not know what the remedy is, so as not to have it used indiscriminately by the laity

Dr. H P Hynson, Baltimore, asked a question of practical importance to the pharmacist, who is not able t standardize these products, whether Dr Osborne observed any great difference in the products of various manufacturers of thyroid extracts, and if so, which he considers the best

Dr. William R White, Providence, R I, asked Dr Osborne to give in detail the treatment, that is, in relation to food and how many times a day the thyroid extract should be administered, etc

Dr O T Osborne, New Haven, Conn, thought the indiscriminate use of thyroid reprehensible, and large dosage dangerous If a small dose does not do good large doses should rarely be administered It is preferable to give the dose on an empty stomach, and have the patient chew the tablets or take an uncapped capsule between meals, with a drink of water It is often a good plan to tell a patient to take the cap off a capsule and then take it with hot water, as the solution and absorption of any drug is more rapid so He believes that all drugs which are being experimented with should be kept from the knowledge of the patient who is taking them Physicians should keep a few tablets in their medicine closets and administer them—not give a prescription for thyroid to the patient to take to the pharmacist to have filled This, he said, with all due respect to the pharmacist. In this way the effect of the remedy may be watched unbiased by the psychic effect on the patient, so that she will not say "Oh, you are reducing my weight" As soon as it is decided that thyroid is the treatment for a given case it can be ordered He has used the best product that he could obtain in his cases As to specifying the particular manufacturer of thyroid, if he knows that his patients will go to the druggists who are absolutely upright, he feels that such druggists will give him the best that money will buy and he writes the Pharmacopeial title of thyroid The more pharmacists can be depended on to buy the best and the more patients are ready to pay for the best the more satisfactory will be the result He did not care to answer in detail the question of Dr Hynson, but he said that he is likely to send his patients where he believed they would get the best

SOLANIN *

WILLIAM F WAUGH, A.M, M D

CHICAGO

Solanin is an alkaloid found in several species of *Solanaceæ*, such as *Dulcamara ferox, lycopersicum, nigrum* and *carolinense*, and especially in the young shoots of the potato and tubers that have grown while exposed to direct sunlight, and those that have sprouted. Traces have also been detected in *Scopola.* At some period in the growth of the potato the deep layers of the skin contain enough solanin to cause toxic symptoms It is extracted by boiling water, and that in which potatoes are boiled may prove toxic Rotting potatoes contain large quantities of solanin, and the young buds, enormous amounts

Most instances of poisoning follow the use of the small, green, unripe tubers that have been exposed to the sun at the surface of the ground In an epidemic described by Schmiedeburg the symptoms were headache, colic, vomiting, diarrhea, depression, mental confusion and in severe cases pallor or cyanosis, dilated pupils, short periods of unconsciousness with rapid pulse, slowing later, and in many instances a rise of temperature All the patients recovered within ten days

Pfuhl also witnessed many cases in soldiers who had eaten poisonous potatoes The symptoms in 56 cases were similar, consisting of chills, fever up to 103 F, headache, violent colic, diarrhea, severe muscular prostration, sometimes nausea or vomiting and syncope, with slight jaundice The fever subsided within three days, and all recovered The treatment consisted of rest in bed, cold to the head and heat to the abdomen, calomel, mint and opiates The potatoes contained six times the usual quantity of solanin It is not stated whether they were sprouted, green or rotten In the latter case, part of the symptoms should be attributed to ptomaines

In fatal poisoning by the plants containing solanin, the first symptom attracting attention has been an acrid, burning sensation in the throat, followed by great restlessness, gastrointestinal irritation, muscular and fibrillary tremors, labored respiration, dryness and hyperesthesia of the skin, rapid pulse, collapse and coma, the temperature falling markedly shortly before death The pupils are generally dilated Albuminuria is usually present Some of these symptoms are probably due to an accompanying principle of the atropin group

Solanin may be prepared by expressing the juice of etiolated potato germs, adding an excess of lime-milk or of ammonia, by which solanin is precipitated This is then separated by filtration the insoluble part dried and exhausted by boiling alcohol, which deposits crystallized solanin on cooling (Desfosses)

DESCRIPTION

Solanin occurs in fine silky needles, colorless, insoluble in water, slightly soluble in ether and in cold alcohol It is a glucosid in that it splits up into glucose bodies, an alkaloid as to its basic properties, having a feeble alkaline reaction and forming salts with acids Submitted to the action of boiling dilute mineral acids, it splits into three equivalents of glucose and an alkaloid, solanidin, whose formula is $C_{50}H_{41}NO_2$ Treated by an amalgam of sodium and water, it gives nicotine, $C_{20}H_{14}N_2$, and butyric acid, $C_8H_8O_4$ Solanin also possesses the property of forming a gelatinous mass with cold amylic alcohol, even in the proportion of 1 part to 2000 Cool amylic alcohol is its best solvent

Spiegel gives the formula of solanin as $C_{52}H_{93}NO_{18}$ plus 4 5 H_2O The salts are mostly amorphous, and freely soluble in water or in alcohol. They are decomposed by an excess of water, setting solanin free

Solanin belongs to the saponine group, and hence is an energetic protoplasmic poison A 1 per cent watery solution prevents the development of bacteria and the coagulation of the blood, dissolving the blood elements (Perles) The lethal dose *per os* is 0 3 per kilo of body weight and about 0 1 per kilo when administered subcutaneously

EFFECTS

In rabbits Husemann noted from solanin a reduction of temperature of over 5 degrees Fahrenheit, with muscular tremors, spasm of the muscles of the jaw, the respiration at first rapid, later slowing, with dyspnea and a fall in cardiac energy Tonic and clonic convulsions followed, with mydriasis and death from suffocation. The heart continued to beat after the cessation of respiration, finally stopping in diastole He affirmed that solanin does not irritate the stomach, bowels or the subcutaneous tissues but Perles noted after intravenous injections severe enteritis, which he attributed to the excretion of the poison into the bowels He also found evidences of recent parenchymatous nephritis, the urine containing hemoglobin, methemoglobin, albumin, casts and a few red blood corpuscles In his experiments on animals he found the same appearances postmortem as after sapotoxin poisoning The alkaloid solanin did not give rise to diarrhea, as the plants from which it is derived do, possibly because the naked alkaloid is absorbed from the stomach while the crude plant tissues pass along into the intestines But solanin affected the kidneys more decidedly This is confirmed by Caylus, who calls attention to the diuretic action of the alkaloid, the tetanic spasms of the thoracic muscles it sometimes causes, and the hyperesthesia of the skin He locates its action in the cord and medulla and denies any direct influence on the brain, the stomach or the bowels

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* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Fifty seventh Annual Session, June, 1906

But Brunton says that solanin in warm-blooded animals paralyses the central nervous system, without affecting the peripheral nerves or the voluntary muscles It slows the heart and the rate of respiration, lessens sensibility, and causes death with convulsions The temperature constantly falls The pupil is unaffected It produces weakness, labored breathing, nausea, vomiting, and drowsiness, but not true sleep It does not increase the action of the bowels, skin or kidneys Nothnagel agrees with Brunton as to the production of central paralysis, depression of heart and lungs, death from asphyxial spasm, and causing nausea and vomiting in man

Von Schroff found doses of three grains caused yawning, dizziness, stupor, somnolence, but not sleep, tonic spasm, rapid pulse, but weak, embarrassed respiration, nausea, salivation, and extreme weakness Solanidin differed in causing mydriasis and elevation of temperature, and this was probably present in preparations causing these symptoms

Solanin appears to be broken up in the body, as very little is excreted in the feces or the urine (Perles)

Bocquillon-Limousin says that solanin lessens the sensibility of the respiratory mucosa, slowing respiration, and that it possesses mild narcotic properties

BROMIDS AND SOLANIN COMPARED

Bromid.	*Solanin*
Motor centers depressed in brain.	Much less.
Cerebration depressed in brain	Unaffected.
Reflex irritability depressed in cord.	Depressed more
Sensory centers depressed in cord	Depressed
Respiratory centers depressed.	Depressed.
Sexual centers depressed.	No data.
Peripheral nerves unaffected.	Small doses excite large depress.
Muscles weakened or unaffected.	Same
Heart unaffected	Depressed by large doses.
Skin irritated by excretion, acne.	No effect.
Temperature lowered.	Much more
Stomach irritated.	By large doses only
Anorexia.	By large doses only
Salivation	By large doses only
Thirst.	By large doses only
Nausea, vomiting	By large doses only
Fetid breath.	By large doses only
Some diarrhea or constipation.	By large doses only
Somnolence no true sleep	Same.
Cutaneous anesthesia.	Sensation raised (Caylus)
Mucous anesthesia.	None.
Impotence.	None.
Pulse slow and weak.	Less marked
Respiration weak.	Motion and sensation lower
Urine increased.	Same
Respiratory secretions increased.	More edema sometimes
Muscular tremor	Same
Vitality depressed.	Not so
Metabolism lessened.	Same.
Vascular tension relaxed.	Small doses raise large lower
Gastric juice decreased.	Unaffected.
Menstrual flow decreased.	No data.

While the data are incomplete and to some extent contradictory, we may see the close similarity between the effects of solanin and the bromids as to their general depressive powers The chief differences are that the bromids act specifically on the cerebral centers, cause acne, interfere markedly with the digestion as shown by the anorexia from all doses and fetid breath from large ones, depress the vitality, rendering the taker more liable to intercurrent infections and lowering his power of sustaining such attacks, and in all doses depress the sexual function, completely inhibiting it in full doses, reduce the sensibility of the skin and mucosa, and even in small doses relax vascular tension Solanin acts more on the cord, less on the brain, has no action on the skin, interferes very little, if at all, with digestion, does not depress vitality or the sexual function, increases cutaneous sensibility, and increases vascular tension slightly in small doses, lowering it in large doses Solanin depresses both motion and sensation in the respiratory area more decidedly, acting less markedly on the heart, lowers temperature far more, tends to produce respiratory and renal edema in very large doses, like rhus and cantharidin, and in small doses causes slight diuresis It will thus be seen that in the desirable range of effect solanin admirably replaces the bromids without their most marked undesirable action We may, therefore, look for the therapeutic field of the alkaloid to that wide one so generally occupied by the bromids

WIDE APPLICABILITY

Of the plants containing solanin as their active principle, dulcamara is the best known It evidently contains others, as the effects are not identical with those of the alkaloid Dulcamara has been recommended for scaly skin diseases, rheumatism and acute respiratory ailments, and as an aphrodisiac, for nervous erethism, hyperesthesic states and pudendal pruritus, chronic bronchitis, asthma and whooping cough, cachexias, lymphatic stases, jaundice and other cases in which the excretory passages are obstructed by débris, menstrual suppression from taking cold, cystitis, feeble capillary circulation with cold extremities, and delayed or retrocedent eruptions *Solanus carolinense,* the horse or bull nettle, has been recommended for various nervous maladies, and has acquired a reputation as a remedy for epilepsy Hare gave it a brief trial and reported some success Thrush found it best suited to cases of *grand mal,* beginning subsequent to childhood, and not hereditary Lloyd advises it, especially in cases in which the paroxysms are worst about the menstrual periods Maxwell and Potts reported favorably on this plant as a remedy for epilepsy

Solanin has received some attention in France and Italy Firope recommended it for all maladies characterized by excitement, spasm or pain, while Geneuil urged it as a substitute for morphin in neuralgia, gastralgia and rheumatism, in which, however, he did not find it as reliable as morphin, which is comprehensible It will be long before the physician will attain such proficiency in the use of any substitute for that all-powerful medicament, let alone the difficulty of obtaining a rare alkaloid in uniformly good quality Sarda applied solanin in all diseases of the central nervous system and Fronmueller in agrypnia, with irregular benefit. But in symptomatic and hysteric asthma and in whooping cough Clarus and Capparoni found solanin a reliable remedy, the action being direct and by reflex sedation Capparoni found it of value in reducing morbid excitability of the spinal cord, in peripheric muscular spasms and difficulty in walking, and in tremors De Montguyon also advised it as a substitute for morphin having no cumulative action or congestive effect on the brain Hughes urges solanin in the threatening pulmonary paralysis of elderly and infantile cases of capillary bronchitis, with retention of secretion, Bocquillon-Limousin employed it for cardiac asthma, whooping cough, bronchitis, all spasmodic affections, sciatica, rheumatism, gout, neuralgia, cystitis, gastric pains, dyspepsia and prurigo Caylus advised it in respiratory spasm or irritability Desnos employed solanin in gastralgia, painful dyspepsias and in alcoholic gastritis, with or without dilatation of the stomach, in a case of ulcerative gastritis with hematemesis, in an old gastric ulcer and in one of pyloric cancer the pains quickly disappeared under solanin Shoemaker mentions the use of this remedy in locomotor ataxia, myalgia and the vomiting of pregnancy Hare found it beneficial in spasmodic torticollis

These citations suffice to show the wide applicability of solanin as an anesthetic sedative and antispasmodic, and as the dependence of pain on spasmodic conditions becomes more generally recognized the superiority of the antispasmodics to morphin will be also better comprehended and the heedless use of that dangerous resource beneficially curtailed We would, however, call in question one of the indications for solanin given by Hughes In large doses this alkaloid tends to produce pulmonary edema, and it lessens the sensibility of the respiratory mucosa, and hence can scarcely be indicated in a condition in which the danger lies in the low degree of sensibility that permits the collection of mucus until aeration is impaired and cyanosis results Besides, in sanguinarin we have a remedy so admirably suited to this condition that no doubtful one is admissible.

Of great interest is solanin as a remedy for epilepsy Employed empirically in crude preparations, it has won considerable popular and some professional favor The comparison made between its physiologic action and that of bromids shows that solanin may be legitimately exhibited for the same purposes as the salts of bromin, while certain advantages are thereby obtained in the way of eliminating undesirable bromid effects, as well as the smaller and more easily administered doses If we can get from a few little granules all the benefits accruing to doses of a dram or more of bromids, and escape the destruction of the functions of the stomach, the disfiguring acne, and even more serious disorders of cutaneous nutrition, a decided advance in therapeutic application will be made Furthermore, we can not look on the grave depression of the sexual function caused by full doses of the bromids as of minor importance Desirable as the inhibition of the sexual function may be in many cases, we must confess to a feeling that in so doing we are tampering with the essential vital principle, and striking closer to the roots of a patient's life than is warranted except when such interference is manifestly indicated Such an indication is presented in some, possibly many, cases of epilepsy, and then it should receive due attention, but since this is not an invariable or essential feature of this malady, it is certainly an objection to the bromids that sexual depression from their use is unavoidable It is possible, however, that some sexual depression ensues from solanin, but it can not be marked or some of the numerous observers quoted would have alluded to it, and while dulcamara alone of the solanin containing plants is accredited with sexual sedation its effects vary too widely from those of pure solanin to be ascribed to the latter alone

As a remedy for epilepsy solanin was presented to the readers of the *Alkaloidal Clinic* in March of last year Since that time we have received 23 reports on it. All have been favorable, excepting one, in which the alkaloid was alternated weekly with bromids, and hence can not be accepted In children the paroxysms without exception have ceased within three weeks The accessory treatment has been dietetic and hygienic in general, with special care in regulating the elimination, useful, but not by any means calculated to exert over epilepsy the immediate and decided control secured by the use of solanin

DOSAGE

The dosage of the older observers we are compelled to cast aside, as the variable quality of their solanin caused an inextricable confusion With a chemically pure alkaloid we have found that the average adult dose is 1/12 grain, and as yet we have not found it necessary to exceed one grain *per diem* No undesirable effects have been observed from these doses Should an overdose be taken, the first toxic manifestation would be an acrid burning sensation in the throat, followed by oppression of respiration The probably fatal dose is placed by Riley at six grains Poisoning should be met by washing out the stomach, the use of strong tea or coffee, sustaining the temperature and strength by heat externally, with strychnin hypodermically in sufficient doses The effects are quickly manifested and not very enduring, but the exact duration has not been determined Merck suggests tannic acid as an antidote For children the doses may be regulated in the usual manner In all cases it is necessary to push the remedy until unmistakable constitutional effects are secured, the remedial action lying close to the limit of beginning toxic action

CONCLUSION

Should this remedy prove of the value indicated, the profession will owe it to Dr M Clayton Thrush, Philadelphia, who found the plant enjoying a popular reputation as a remedy for epilepsy among the people of West Virginia, investigated it, extracted its active principles showed that on them the virtues of the plant depended and applied the preparations he had made in the treatment of epileptics with success Thus we have another evidence of the wealth of therapeutic resources yet awaiting the investigator of native American plants

DISCUSSION

Dr George F Butler, Chicago, said that recently the superintendent of an insane asylum told him that no case of epilepsy was ever cured As epilepsy is seen in the insane asylum, Dr Butler considered this statement absolutely correct, but to make a broad assertion that no case of epilepsy is cured he considered a mistake From his own experience and from information furnished by others, he is satisfied that many cases of epilepsy are cured, not only recent cases, but those which persisted for a long time as well Much depends on the attitude of the physician who takes hold of the case He must be an optimist, not a pessimist If he believes that epilepsy is incurable he treats the disease according to the rules laid down in the average text books, that is, he fills his patients full of bromids. The dulness of mentality is attributed to epilepsy when in fact it is attributable to the bromids Dr Butler thought that there is no more disastrous or wrong treatment than the administration of bromids for epilepsy The untoward effects of the bromids do more harm than the epilepsy Bromids destroy the mentality, weaken the heart, impoverish the blood impair the sexual function and altogether make the patient very miserable and despondent In his opinion it is time for the bromid treatment of epilepsy to be discontinued The untoward effects of bromids will more than double the disastrous effects of epilepsy If there is a drug that will take the place of the bromids without producing the untoward effects of the bromids he wanted it Personally, he had no experience with solanin, but he knew a physician in Chicago who has tried this remedy with remarkable results Any addition to the materia medica should always be welcomed when presented by a reputable physician and it should not be belittled by any who have had no experience with it If anything is found to be good, all right, if it is found to be not valuable, discard it He would not give bromids An optimistic view of epilepsy should be taken, the patient's hygiene, activity, diet, should be regulated, and an endeavor should be made to get him out of the epileptic habit If there is any drug which will lessen the reflex irritability it should be tried. It would seem that solanin is a medicine which may take the place of the bromids with great advantage The next case of epilepsy he has he will try solanin From the physiologic action he anticipates some very good effects

Dr. M Clayton Thrush, Philadelphia, said he had been interested in this drug for a number of years His attention was first called to the *Solanum carolinense* in West Virginia He noticed that many colored people gathered berries of a certain plant and steeped them in whisky and took the decoction, receiving wonderful results in epilepsy He investigated the drug and found it to be the *Solanum carolinense*, or horse nettle, and decided to make a complete investigation of the drug As to its chemical composition, quantitative analyses were made of all the various parts of the plant in order to determine which part of the plant was most active therapeutically It was found that the fruit contained the largest amount of solanin, the root was next in amount, then the leaves, and finally the stem The alkaloids solanidin and solanin were combined in this drug by solanic acid. The solanidin was found to be present in about 7 6 per cent the amount of the solanin, and the solanin was found to be converted by heating with a dilute acid into solanidin Solanum contains solanidin, which is soluble in ether, and is readily detected by the proper chemical reagents Solanin is extracted by chloroform from the alcoholic extract It is very sparingly soluble in ether and water, freely soluble in chloroform and amylic alcohol, and also soluble in cold alcohol, more so in boiling alcohol. By heating in the presence of a diluted acid solanin is converted into solanidin and another substance capable of reducing Fehling's solution which is probably a form of glucose Water will extract the solanin due to the presence of solanic acid Solanin is present also in the berries of *Solanum nigrum*, in potato sprouts (*Solanum tuberosum*), in the common tomato leaves (*Solanum lycopersicum*), and in the formerly official *Solanum dulcamara*, the fluid and the solid extracts are made with a menstruum of two parts of alcohol and one part of water by the usual percolation method This will apply to all parts except the fruit, which must be macerated. The remainder can be dried and made up as a fluid extract The objection to the tincture is the large amount of alcohol present. As a result of pharmaceutical investigation it has been found that the fluid extract and solid extract are the best preparation of the drug The alkaloid solanin itself can be used, with practically the same effect. Microscopic examination showed starch, tannin (calcium oxalate crystals), mucilaginous matter, resin and fixed oil in addition to the usual structural constituents The medical properties had been well covered by Dr Waugh As solanin is a poison to the terminal motor plates paralysis may be sensory and motor By reason of this solanin is to be classed among the best analgesics There is no danger of an accumulative action It does not cause congestion of the brain, even in the aged In all cases in which it is necessary to calm excitement relieve pain or overcome spasms, it promises excellent results It may be given with advantage in place of morphin Dr E Q Thornton has investigated the physiologic action of solanum on frogs by injecting the solid extract hypodermically into the posterior lymph spaces in doses of about 3 mg to the gram weight of the frog He found that the drug depresses the respiration, has little or no effect on the circulation, depresses the cerebrum and stimulates the cord The reaction to acids is lost before tactile sense, and the same may be said of heat. In a series of investigations to ascertain its clinical value the drug has been employed in four Philadelphia hospitals, in about 25 cases of epilepsy in its various forms In order to show the efficacy of this drug he related one instance This girl is entirely cured, there being no symptoms since four years ago She had the disease since 7 years of age and had been using bromids, and every time developed a profuse acne As a result of his own experience he had reached the following conclusions 1 That *Solanum carolinense* is of the greatest value in *grand mal* of idiopathic type without hereditary taint, when the disease has begun beyond the age of childhood. 2 It is perhaps next of greatest value in hystero epilepsy with marked convulsive seizures In cases of *petit mal* the drug does not seem to do the great good that has been noted in the major type of the disease 3 In cases of well advanced epilepsy of any type in which there is degeneration of the cerebral neuron, the drug will act specifically for a time even better than the bromids, but it will finally be determined that the bromid salts will ultimately control the attacks better in these cases 4. The foregoing clinical study has brought out sufficient evidence to warrant the statement that the inherent advantage of vegetable depresso motors is great as compared with any mineral salt given with the same intent, since destruction of the blood corpuscles by the latter is a most detrimental feature toward lessening the resistance of the individual in a disease, in which, above all, the constitutional tonicity should be favored as ideal treatment 5 A thorough impregnation of the nerve cells can alone be had and, therefore, cure hoped for in epilepsy in proportion as solanum is pushed to the fullest physiologic dosage and maintained *through periods of months, a year not being too short a time* to warrant its discontinuance 6 The fluid extract of the drug made freshly is the ideal form of pharmaceutical preparation given in ascending doses commencing with one fluid dram and increasing to the full constitutional effect. 7 It is to be decidedly preferred to the bromids in those cases in which it can be used advantageously, because no toxic symptoms follow its free administration, and the mental faculties are not impaired by its use.

Dr. William F Waugh, Chicago, said that 30 years ago one of his brother officers in the navy said he thought it was a great mistake that steam had displaced the sail, that the American clipper ship was the highest type of the ship builder's art, that the world should have been contented with it and not gone further It is perfectly natural for conservatism to hold back, but the world never stands still, and is constantly asking for something better It is his firm conviction that if the faith of the world in drugs, which it seems to have lost so completely, is to be renewed, something better must be given than it has had With this feeling he presented his paper on solanin, which gives certain advantages that justify the physician in giving it a trial, at least

Clinical Notes

DIRECT TRANSFUSION OF BLOOD IN THE TREATMENT OF HEMORRHAGE

PRELIMINARY CLINICAL NOTE

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During the past year a series of seventy-four carefully conducted experiments on the direct transfusion of blood in the treatment of hemorrhage in animals was made by Dr Dolley and myself, and from these experiments the following conclusions were drawn

Arteries and veins of varying sizes may be readily anastomosed by Carrel's method so as to be impervious to blood and free from clotting, the transference of blood from one animal to another is most definitely accomplished by anastomosing the proximal end of an artery of the donor into the proximal end of the vein of the donee, convenience need be the only consideration in the selection of the vessels to be anastomosed, the blood of one animal may be rapidly transfused to another, the blood of one dog is isontonic with that of another dog, if a dog be bled to the last drop of blood that will flow, and then an equal amount of blood be transferred from another, the transfused blood suffers no impairment by the blood or tissue of its new host, and, in turn, it causes no impairment, no hemolysins are produced, and finally, the transfused blood becomes a perfect substitute for the lost blood, and the factor of hemorrhage may be eliminated

After having covered by experiments every conceivable phase that would have a clinical bearing, I concluded to make a clinical test in the first case that baffled all other forms of treatment, and in which the patient apparently must otherwise inevitably die The opportunity was presented in a case of secondary hemorrhage following nephrolithiasis, the history of which is as follows

Case 1—Male, 23 years old Diagnosis, nephrolithiasis

Operation—Four large stones were removed from the pelvis of the kidney, where they had caused local infection and the formation of a vascular membrane about them The wound formed in bisecting the kidney was packed with gauze. On opening the kidney there was considerable hemorrhage, but it was readily controlled then and after the operation

Subsequent History—On the fourth day oozing began to appear on the dressings, and there was also hematuria This continued until the morning of the fifth day in spite of all the measures that could be employed against it, including packing, pressure, etc By evening the condition of the patient had become alarming The hemoglobin was reduced to 25, the red cells to 1,800 000, the pulse was 160 beats per minute and barely perceptible, the respirations 48 per minute and gasping, and the patient was unconscious Treatment by posture, bandaging saline infusions, stimulants, repacking, adrenalin chlorid solution, etc., was of no avail It was clear that the terminal stage was at hand with all the resources at command exhausted. It seemed, therefore, a suitable case for transfusion, and one which would afford a crucial test of its value A willing donor in the person of the patient s brother was at hand

First Transfusion—Under local anesthesia an anastomosis between the proximal end of the radial artery of the donor and the proximal end of the basilic vein of the donee was made, and the blood was allowed to flow steadily for 30 minutes As a result the patient promptly came out of his un unconscious state, the pulse and respiration fell, the blood pressure rose from 63 to 94 millimeters of mercury the hemoglobin from 28 to 50 per cent, and the red cells from 1,800 000 to 2,000 000 In the donor the hemoglobin fell from 100 to 70 per cent and the red cells from 5,500,000 to 4,600,000 per cubic millimeter

The patient was then in such good condition that the original plan of doing a nephrectomy was followed, using ether as the anesthetic. The operation was well borne in spite of difficulties in removing the kidney, which will not be here mentioned

The following morning the condition of the patient was unsatisfactory on account of decomposing blood clots filling the bladder Under cocain I then made a suprapubic cystotomy, washing out a large quantity of foul smelling urine, and removing quantities of infected blood clots During the day following this there was total suppression of urine and marked uremia This was overcome during the following night, and the next day he was better Improvement continued for two weeks, when the larger part of the lumbar wound was healed A severe cystitis continued Then, without warning a profuse hemorrhage set in from the bladder and continued for two days in spite of all treatment The red cells again fell to 1,900,000 and the hemoglobin to 25 per cent. The pulse rose to 130, and his condition was critical

Second Transfusion—This time another brother served as donor The patient's condition immediately improved again, the red count reaching 3,000 000, and the hemoglobin 54 per cent The granulations in the remainder of the lumbar wound had been pale and inactive, but the next day they were red and healthy No further hemorrhage occurred, and from this time on the red count rose until it reached 4,800 000 He was discharged from the hospital as cured on the twenty fifth day after the second transfusion He has now resumed his work and shows 6,400,000 red cells

Two patients with typhoid hemorrhages received transfusion, one was in extremis and the other one very low Both were wonderfully revived by the transfusion One was dying at the time, but became entirely conscious and rational and held his improvement until further hemorrhage proved fatal on the following day The other patient survived further hemorrhages, but died later with a double parotitis and typhoid Under similar circumstances I should suture the typhoid ulcers, as the patients after the transfusion were good surgical typhoid risks

The fifth transfusion was for a secondary renal hemorrhage following nephrolithotomy The patient was very poorly nourished and a poor risk The hematuria continued for thirteen days, and finally his red count was reduced to 1,800,000, hemoglobin to 28 per cent, and he had been delirious for two days We then performed transfusion in a similar manner to the preceding As the fresh blood flowed into his vessels his delirium gradually lessened and while on the table and during the transfusion entirely disappeared The lumbar wounds healed, but an abdominal wound made for exploratory purposes, although resutured twice, never showed a sign of repair, finally ending in peritonitis and death The blood count, without any further treatment, however, was maintained to the end

The last case was that of a woman who had been bleeding from the bowels for four months, and during that time had been under medical treatment Her secondary anemia was extreme, the hemoglobin was approximately 12 per cent, red cells 1,200,000 She was in such a low state that it was not safe even to anesthetize, and was brought in for the purpose of making a transfusion The transformation in this case was extraordinary The lemon-yellow color was replaced by white, then by pink, the lips became red, the blood count was more than doubled and the hemoglobin trebled She felt invigorated and stimulated All other treatment was withdrawn and her hemorrhage ceased Three weeks later a little blood was noticed at stool She was then anesthetized and thoroughly examined, when it was found there was marked varicosity in the rectum with some small ulcers These were sutured over and the patient left the hospital at the end of six weeks with a red blood count of 4,000,000 and hemoglobin of 70 Before the transfusion she had no appetite and could scarcely be made to take nourishment Directly after the transfusion she had a very vigorous appetite and gained rapidly in health and strength Her red cells rose to 2,500,000 (more than doubled) and hemoglobin to 40

We have complete tables of observations in each case on the red blood count, the hemoglobin, and the blood pressure of both the donor and donee, and records of urinary examinations in the donee, extending over a period of time These tables will be included in the complete publication Six clinical transfusions have been done The donors in each instance regained the blood lost in from five to seven days They had been kept from their work only the day of the transfusion All showed the usual temporary effect of the bleeding, no agglutinins, no hemolysins

The donee showed neither nephritis nor hemoglobinuria, no laking of blood, and no evidence that the new blood had in any way unfavorably affected the donee, nor that the donee had unfavorably affected the newly transfused blood In other words, the conclusions reached in the laboratory were wholly realized in the clinic

The occurrence of spontaneous cessation of hemorrhage in two of the cases—each of which was pathologic—suggests strongly this method of treatment for cholemic, hemophilic and other forms of pathologic hemorrhage

Since the healthy blood of one individual is apparently physiologically interchangeable with that of another, if the blood lost by one is replaced by an equal quantity from another, the factor of hemorrhage may by direct transfusion be eliminated

The transformation in these cases has been unequaled in my surgical experience except in the relief from asphyxia by intubation

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TWO ATYPICAL CASES OF SMALLPOX

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CASE 1—*History*—On April 1, 1905 I saw J H at the Indianapolis City Hospital, who had been sent there on the previous day with (alleged) typhoid fever There was no history of syphilis and the patient had had the infectious diseases of childhood He had been vaccinated six years ago The patient had been a moderate drinker of alcoholic stimulants His present sickness commenced with a general malaise and occasional chilly sensations There was no pain, appetite was good, bowels were constipated, and there was some slight fever

Examination—I found the skin dry, face slightly flushed, and a few papules which, in their incipiency, a few days previous to admission to the hospital, had been designated as the rose-colored spots of typhoid fever There was a slight elevation of temperature Tongue was heavily coated, abdomen slightly tender and palpation of the chest gave negative results This was true in percussion also, except a dulness over the left lobe Heart was regular and sounds were clear On the second day, which was the first day I saw him, there were a few fine papules on the face which some had suggested might be acne vulgaris, since the patient had had this disease since childhood There was an occasional papule on the chest and abdomen, but no indication of induration, unless it was an isolated one on the chest, which possibly gave the appearance of an incipient umbilication

Diagnosis—Dr J M Wallace the interne, and myself, made a provisional diagnosis of smallpox, although the evidence was not strong The patient was quarantined On the second day the spots on the chest, face and abdomen were more numerous, but with little induration The temperature was normal On the fourth day vesicles were well formed on the face and an occasional pustule On the fifth day the disease was well developed, but very mild indeed, and one in which mistaken diagnosis could easily have been made

Patient was discharged from the smallpox hospital April 21

CASE 2—*History*—J R, colored, aged 60 years, was admitted to the Indianapolis City Hospital, March 30, 1905, with ascites, pulmonary edema and dyspnea as a result of myocarditis and chronic nephritis The legs were edematous The patient responded promptly to treatment and gave every evidence of having recovered April 1, with the exception of an occasional attack of dyspnea when doing chores at the hospital These, however, were infrequent, and did not interfere with his duties as assistant April 3, together with all patients, he was vaccinated on account of appearance of Case 1 in the ward, but it was unsuccessful

Course of Disease—April 17 he complained of not feeling well, seemed to talk irrationally and had a subnormal temperature April 18 I found the patient had left his bed and was sitting in a chair at a remote portion of the ward, with signs of collapse, pulse imperceptible Following the hypodermic injection of digitalin and strychnia, his condition slightly improved. On the following day there was no change. April 20 my attention was called to a roughness on his forehead, and on close examination the same condition was present on the back chest and abdomen On the following day, on some portions of the body there were papules, others felt like bird shot and several pustules were on the abdomen and chest In two locations on the abdomen several of the pustules seemed to coalesce and form a large one At no time did the patient's temperature reach normal The different stages were present on the same person and at the same time

Diagnosis—Diagnosis of smallpox was made, and although there was some little doubt in the case he was removed to the contagious pavilion Three days the development of the eruption was sufficiently pathognomonic to confirm the provisional diagnosis The case was seen by Drs C E Fergerson, A. W Brayton, Paul Martin and J M Wallace.

Some of the irregularities of the case will be recognized as follows Pre-eruptive stage imperfect, absence of the gradual appearance of eruption, various stages of eruption at the same time, resembling varicella somewhat, the eruptions in some localities possessing the characteristic histologic formation, while in others the vesicles were inclined to be unilocular rather than multilocular, and the variation of temperature in the one case and subnormal in the other The unusual features in these cases, especially in the last one, will be easily recognized, and, therefore, comment is unnecessary

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FATAL POISONING BY THE EXTERNAL APPLICATION OF BICHLORID OF MERCURY

G G CRAIG, M.D
ROCK ISLAND, ILL.

Patient—I was called July 11, 1906, to see a young woman, aged 25, who had applied wood alcohol to her neck, back and left arm for rheumatism

Examination—She was hysterical, and said that the burning from the application was intolerable The parts were very much reddened and inflamed, presenting the appearance of an ordinary scald or burn I gave her a hypodermic injection of morphin and prescribed a local application of saturated solution of bicarbonate of soda. The next morning I was informed that the wood alcohol contained a large quantity of bichlorid of mercury

Course of Treatment—The patient passed an uncomfortable night She complained of a burning sensation in her mouth, some vomiting, and a slight diarrhea The back of the neck, the whole back down to the waist, and the left arm were thoroughly burned, and had become largely covered with blisters during the night I treated the local injury as an ordinary burn, with a solution of bicarbonate of soda, punctured the edges of the blisters, preserved as much as possible the blistered skin for a dressing, and applied stearate of zinc. The burn improved nicely She was nourished by white of egg and milk exclusively The inflammation of the mouth, throat, stomach and bowels steadily increased and she died on the morning of July

17, a little over five and one half days after the accident At death the tongue was nearly double its normal size, and of a brownish color It looked like cooked beef, and during the night before death the bowels were moving constantly

Remarks—The application used was what is commonly known as "dead shot," the wood alcohol and the bichlorid of mercury had been purchased separately, and the mercury had been added by the purchaser, hence the label on the bottle was simply wood alcohol, although it also had a skull and cross bones, and a "poison" label on it. The preparation was in a little medicine case in the toilet room and was supposed to have been locked up, but evidently was not The young woman saw it, thought it would be good for her rheumatism, and had a friend apply it

Some years ago I had a case of poisoning by arsenic, which presented almost the same symptoms It was taken by the mouth by a very dissipated middle-aged woman, with suicidal intent She survived the first shock, but died five or six days later from exhaustion caused by inflammation of the alimentary canal

I know of no physiologic antidote for poisoning by corrosive sublimate I relied wholly on giving the patient all the albumin she could take, hoping each day that the poison would become neutralized, and that the patient would recover In that, however, I was doomed to disappointment There was not the slightest indication that the poison was losing its power

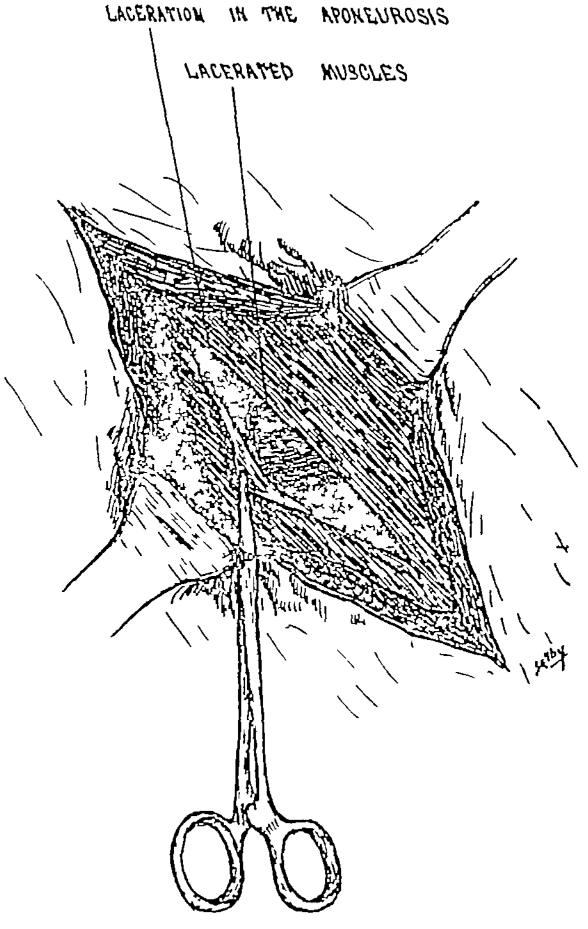
[Editor's Note—There are numerous cases[1] of poisoning from the external application of mercurial compounds Generally the poison has been corrosive sublimate and has been applied in the form of ointment or as an alcoholic solution Watery solutions, however, may be absorbed Even black wash externally applied has produced salivation The symptoms of mercurial poisoning after absorption through the skin are almost identical with those produced by the poison when swallowed The irritation, inflammation and ulceration of the stomach and intestines are very prominent. There is good reason to believe that the stomach and intestines act as eliminating organs in these cases as in poisoning by other substances No clear plan of treatment has been laid down by authors on toxicology for cases of poisoning by external application. The usual antidote for corrosive sublimate is albumin in some form which unites with the mercury to produce an insoluble albuminate This albuminate, however, is soluble in an excess of albumin and hence the administration of albumin as an antidote should be followed by an emetic or by lavage of the stomach to get rid of the mercury which has been rendered insoluble before it can be reabsorbed in consequence of becoming soluble in an excess of the antidote In case of absorption from an external surface, it is possible that the mercury escapes from the system in the gastric and intestinal mucus, in which case probably the use of albumin would be superfluous, if not contraindicated Whether or not another antidote might be used is uncertain, it would seem as if a trial of some sulphid might be desirable In regard to the external wound, probably nothing better could have been done than was done by Dr Craig, as the bicarbonate of sodium tends to produce an insoluble basic carbonate of mercury which would not so readily penetrate the skin But it is probable that in this case the poison had been absorbed before any application was made Aside from the attempt to produce an insoluble compound of mercury in the intestinal canal, there is no special treatment for poisoning by mercury Elimination should be encouraged by copious introduction of liquids, possibly better by enteroclysis or hypodermic injection of saline solutions, proper stimulants should be given, and the particular symptoms treated as they arise]

DIRECT ABDOMINAL HERNIA OF TRAUMATIC ORIGIN

CLARENCE D SELBY, M.D

TOLEDO, OHIO

This case is interesting, perhaps more in its origin than in the lesion produced, though none the less instructive



Patient—A man, aged 32, laborer, was employed with a wheelbarrow on a scaffolding six feet from the ground, when a misstep caused him to fall, the wheelbarrow following and the handle striking him in the right iliac region

Examination—When first seen, a short time later, there was a soft hemispherical mass, 6 cm in elevation and 8 cm in diameter in the region of the injury, with but slight abrasion and no discoloration of the overlying skin Extreme pain prohibited manipulation, but as the diagnosis was apparent the man was sent to the hospital There when placed in a recumbent posture, the mass receded, and a hiatus could be felt in the supporting structures of the abdominal wall In fact, the margin of the lacerated aponeurosis was plainly palpable

Operation—Under ether anesthesia an incision was made parallel to Poupart's ligament over the break in the wall, which was 4 cm above the ligament. The ruptured aponeurosis was evident The break was clean cut as though produced by a knife following of course the fiber of the tissue The internal oblique and the transversalis beneath were torn away from their points of origin on the iliac crest and crural arch, producing a triangular laceration with the apex toward the anterior superior spinous process The peritoneum was intact. Thus, in the words of the text book, the coverings of this hernia were integument and peritoneum

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[1] See Taylor's Medical Jurisprudence also Blyth A W Poisons Effects and Detection Sachur Berlin Wochschr., 1892 and Meeres Lancet Sept 16 1871

Recovery was perfectly satisfactory and the man returned to work in three weeks

This man at first refused operation Of course it is apparent what the result would have been had he not consented

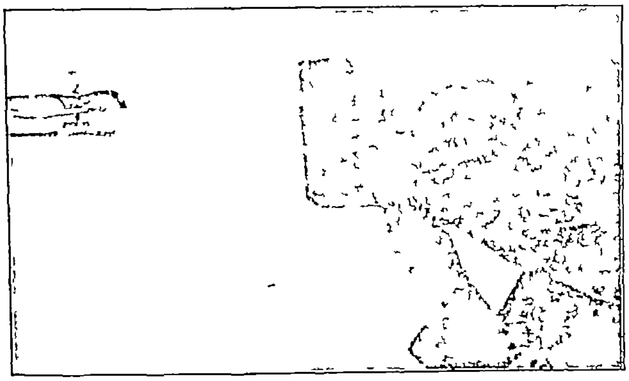
Perhaps the most instructive feature of this case is the fact that the muscles and fascia, the most rigid structures in the wall, gave way, while the integument and peritoneum, the elastic tissues, were unharmed

502 Main Street

SUBSTITUTE FOR DARK ROOM DURING FLUOROSCOPIC EXAMINATIONS

GEORGE W KING, M.D
HELENA, MONT

Physicians who use the fluoroscope only occasionally do not find it convenient to equip a dark room for the purpose and are consequently at a disadvantage when working by daylight To obviate the necessity of heavily screening windows and other avenues of light, a hood can be easily improvised which serves the purpose admirably A sheet of rubber lead composition is chosen by preference, for it serves also as a protection to the operator If the latter is not at hand, several layers of newspapers enfolded in a suitable piece of black muslin and fastened to the fluoroscope will effectually shut out the light So arranged, the observer is in absolute darkness and can see only the image reflected on the fluoroscopic screen



DIPHTHERIA ANTITOXIN IN THE TREATMENT OF EXOPHTHALMIC GOITER

ADRIAN F BURKARD, M.D
OMAHA.

The symposium on "Exophthalmic Goiter"[1] reminds me of a short report[2] under the same heading as my note, written by Dr Robert T Legge, of McCloud, Cal The doctor reported several cases of the above disease, in which he had used diphtheria antitoxin with curative results

Prompted by his report, I lately used the same antitoxin for the same disease, and also with very satisfactory results For though only about five weeks have elapsed since the injection (of 3,000 units), already the tumor has almost disappeared, the circumference of the neck having diminished almost one and one-half inches. The pulse rate has fallen from 135 to 80, the tremor, before injection very marked, is now almost imperceptible, the exophthalmos can no longer be detected, the nervousness and weakness have almost disappeared There have been no untoward effects whatever No other treatment has been used except local inunction with ointment of red oxid of mercury, which before injection had no effect When I reported this case to our local medical society lately four other cases of the same treatment were reported In three of these the results were good or excellent, in one no marked results were reported after several injections

Of course, one case, or a dozen cases, are of very little value But I make this report principally in the hope that other physicians, who may have used the same treatment, may be prompted to report Thus the collective testimony of many may be of value Or probably Dr Legge may have used the antitoxin since, in which case a word from him would surely be of interest

1902 South Seventeenth Street

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[1] The Journal A. M. A., Sept. 1 1906

[2] The Journal A. M. A. April 22 1905

STRIKING IDIOSYNCRASY TO THE USE OF COCAIN IN THE EYE

T W MOORE, M D
HUNTINGTON, W VA.

The patient here referred to has an idiosyncrasy for two drugs, quinin and cocain Such susceptibility to quinin has been frequently reported, and I have seen several cases so afflicted, but I am not aware of any one being affected by cocain in this manner, and a cursory examination of the literature fails to reveal a similar case

During January, in testing the refraction of L. L., a bank clerk, aged 25, I had a nurse in the office instil a solution of homatropin, gr $\frac{1}{2}$, in $\frac{1}{2}$ dram of 4 per cent solution of cocain, one drop in each eye, repeated every five minutes until six drops were used Just before using the last drop the nurse called my attention to the fact that the patient's eyes had become very much swollen To my astonishment I found the lids so swollen that it was only after the greatest effort that the patient could separate them at all There was considerable chemosis and redness, the cornea appearing sunken Hot fomentations, continued for half an hour, reduced the swelling enough for the patient to go home on a car, but it had not disappeared sufficiently for him to resume his duties the next morning, fifteen hours after the first instillation

I was extremely puzzled as to the cause of this until about six months afterward when this patient came to me with a foreign body in one eye. I used one drop of 4 per cent solution of cocain and the patient exclaimed immediately "That is the medicine that swelled my eyes," and in five minutes the swelling of lids and conjunctiva was very apparent and in half an hour (nothing being used to counteract the action of the cocain), the palpebral fissure had become a narrow slit This subsided almost entirely before morning, the patient having applied hot fomentations for half an hour that evening

This young man has considerable nasal obstruction, both the inferior and middle turbinates being almost in contact with the septum when he is free from a cold (which he rarely is) and when suffering from an acute exacerbation of his rhinitis his eyes are red He tells me that he is very susceptible to the influence of quinin, his body becoming nearly covered in a very short time with giant hives with great swelling, from so small a dose as 2 grains

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON-OFFICIAL REMEDIES" THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL

W A PUCKNER, SECRETARY

(*Continued from page 1379*)

IODIPIN 25 PER CENT

IODIZED SESAME OIL, TWENTY-FIVE PER CENT IODINE.

A preparation similar to the preceding but intended for hypodermic administration

Dosage —2 to 6 Cc (30 to 90 minims) by hypodermic injection This article is also marketed in the form of capsules, each containing 2 Gm of iodipin 25 per cent

Prepared by E Merck, Darmstadt. (E Merck & Co, New York)

IODOFORMOGEN

IODOFORMALBUMIN IODOFORM ALBUMINATE

A nearly odorless mixture of iodoform and albumin

It is prepared by precipitating a solution of albumin with alcoholic solution of iodoform and heating the precipitate at 120 C (248 F)

It is a very fine, voluminous light yellew, nearly odorless powder non hygroscopic and non conglutinating It is insoluble in water and sterilizable at 100 Co (212° F) without decomposition or change.

Actions and Uses —Its action is that of iodoform, which is slowly liberated in connection with wound surfaces, making the action more peristent. It limits secretion, favors granulation and promotes drying

Iodoformogen is recommended as a dusting powder for ulcerated surfaces

Dosage —Being about three times as voluminous as iodoform, it is usually applied undiluted to the affected parts It may be used as a snuff in ozena, mixed with an equal amount of boric acid

Manufactured by Knoll & Co., Ludwighafen a. R and New York. German patent No 95,580 U S trademark No 31 186

IODOTHYRINE

THYROIODINE

Iodothyrine is a milk sugar trituration of the active principle of thyroid gland, 1 Gm representing 1 Gm of fresh gland and containing 0 0003 Gm of iodine

According to the patent specifications iodothyrine may be obtained by boiling the fresh thyroid glands, freed from fat with dilute sulphuric acid cooling the liquid and collecting the body which separates, dissolving the active portion in alcohol and evaporating to dryness The product is further purified by washing with ether which dissolves impurities. One part of the active ingredient is mixed with 300 parts of sugar of milk.

It is a white or yellowish white powder having the sweet taste of milk sugar

Actions and Uses —It is similar in action to Glandulæ Thyroideæ Siccæ, U S P, but it is claimed to possess the advantage of more definite strength and absence of decomposable extraneous matter

Dosage —Adults, 0 6 to 2 Gm (10 to 30 grains), children 0 3 to 1 Gm (5 to 15 grains) per day

Manufactured by Farbenfabriken vorm Friedr Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York) E. Merck Darmstadt (Merck & Co New York) U S patent No 680,048. U S. trademark No. 29 406.

ISOFORM POWDER

Isoform powder is a mixture of para-iodoxy-anisol, $C_6H_4(OCH_3)(IO_2)1\ 4 = C_7H_7O_3I$, an iodoxy-derivative of anisol, with an equal weight of calcium phosphate

Para iodoxy-anisol is prepared by the oxidation of iodo-anisol $C_6H_4(OCH_3)(I)1\ 4$ with chlorine or hypochlorites

Para iodoxy-anisol is a colorless powder having a slight anise-like odor It is difficultly soluble in water and practically insoluble in alcohol and ether It may be heated in a dry state to about 200 C (392° F) without decomposition It contains 47 74 per cent. of iodine. It liberates iodine from a solution of potassium iodide and acetic acid. It is liable to explode if heated or when triturated. Hence it is marketed in a mixture with an equal weight of calcium phosphate which is designated "isoform powder

It is incompatible with acids and with reducing agents such as iodides and with the substances generally which are incompatible with iodides.

Actions and Uses —It is a germicide and antiseptic in consequence of its oxidizing power and, in contradistinction to iodoform, it acts not only in a medium free from oxygen, but in conjunction with free access of air It is claimed to be non-toxic in comparatively large doses and to be absolutely non-irritant to the unbroken skin It is recommended as a substitute for iodoform

Dosage —Internally, 0 65 to 2 Gm (10 to 30 grains) per day It is used externally as a dusting powder, as a paste with glycerin, as ointments, suspensions in glycerin, gauzes, etc, in strength varying up to 10 per cent of pure isoform.

Manufactured by Farbwerke, vorm Meister, Lucius & Bruening Hoechst a. M. (Victor Koechl & Co, New York) U S patent No 777,962

ISOPRAL

TRICHLOR-ISOPROPYL ALCOHOL

Isopral, $CCl_3\ CHOH\ CH_3 = C_3H_5OCl_3$, is 1,1,1-trichlor-2-propanol

It is obtained by reaction of chloral with magnesium methyl iodide and decomposition of the compound formed.

It forms handsome prismatic crystals having a camphoraceous odor and an aromatic, somewhat pungent taste producing a burning sensation on the tongue followed by decided anesthesia. It melts at 49 C (120 2 F) but volatilizes very readily at the ordinary temperature, forming sublimates similar to camphor It is soluble in 35 parts of water, but more readily soluble in alcohol and ether

It is distinguished from chloral hydrate by not developing the odor of chloroform when its aqueous solution is warmed with alkali hydroxides.

It should not be exposed to heat and air

Actions and Uses —Isopral resembles chloral in its action, but is effective in smaller dose. It is prompt in effect and apparently devoid of cumulative action It has some degree of local anesthetic power It may be used as a substitute for chloral hydrate and is serviceable as an alternative in cases in which it is necessary to give hypnotics for a long time

Dosage —0 3, 0 6 to 1 Gm (5, 10 to 15 grains) in capsules or wafers which should be dispensed in a well-stoppered glass vial

Manufactured by Farbenfabriken vorm Friedr Bayer & Co., Elberfeld Germany (Continental Color & Chemical Co New York) U S patent No 742,430 German patent No 151 545 U S trade mark No 41 157

KASAGRA

FLUIDEXTRACTUM CASCARA SAGRADA AROMATICUM, STEARNS

A fluidextract said to conform in drug strength to the requirements of the U S Pharmacopeia for fluidextracts It is prepared with especial care the drug being extracted with a menstruum containing no alcohol. The preparation is said to contain 0 05 per cent. of alcohol

Actions and Uses —Kasagra is recommended as an especially palatable preparation of cascara, owing its laxative effects to this drug alone

Dosage —1 to 2 Cc (15 to 30 minims) four times a day, half an hour before meals and at bedtime

Prepared by F Stearns & Co., Detroit, Mich. U S trademark No. 53 070.

KOLA, Stearns

FLUIDEXTRACTUM KOLÆ, STEARNS

Each 30 Cc. (1 fluidounce) is said to represent 31 Gm (480 grains) of fresh kola nut. It contains 23 5 per cent. of alcohol

Action and Uses—Kola seeds contain from 1 5 to 3 6 per cent of total alkaloids of which from 1/100 to 1/40 is theobromine and the rest is caffeine About one-half of the caffeine is combined as kolatannate of caffeine The actions and uses of the remedy are essentially the same as those of caffeine It is probable that the kolatannate is not so active as free caffeine

Dosage—2 to 4 Cc (½ to 1 fluidram) three times a day

Prepared by Frederick Stearns & Co, Detroit, Mich.

KRESAMINE

ETHYLENE-DIAMINE TRICRESOL

A clear watery solution of 25 per cent. of trikresol (which see) and 25 per cent of ethylene-diamine

It is a clear colorless liquid, miscible in all proportions with glycerin, and soluble to the extent of 33 per cent. in water, but insoluble in petrolatum.

Actions and Uses—Kresamine is a powerful bactericide, with a claimed minimum of toxicity It is said that the bactericidal effect of the cresol and its power of penetrating the animal tissues are greatly enhanced by the presence of ethylene-diamine and it is claimed to be far less irritating when used as a wet dressing than other antiseptics It is useful in all cases where an active bactericide is required and particularly when the microbes are in an albuminous menstruum The preparation is not so dangerous as carbolic acid It has been recommended for the treatment of ulcers, eczema, lupus and other skin affections

Dosage—It is used only in dilutions (2 to 25) containing 2 per cent or less of each of its active constituents

Kresamine may be applied in the form of ointment

A dilution containing 2 per cent. of each ingredient was formerly marketed under the name Ethylene-diamine Trikresol Solution' This was used without dilution

Prepared by Chemische Fabrik auf Actien vorm E Schering Berlin (Schering & Glatz New York) German patent No 74 634 74 634

LAC BISMO

MISTURA BISMUTHI, HART

A mixture said to consist of bismuth hydroxide and bismuth subcarbonate, suspended in water in a finely divided state, and containing 0 16 Gm (2½ grains) of the salts in 4 C.c. (1 fluidram

Dosage—4 to 16 Cc (1 to 4 fluidrams) as directed

Prepared by E J Hart & Co., Ltd. New Orleans, La. U S trademark

LACTOPHENIN

LACTYL-P-PHENETIDINE LACTPHENETIDINE, PARA-LACTYL-PHENETIDINE.

Lactophenin, $C_6H_4(OC_2H_5)(NH\ CH_3\ CHOH\ CO)=C_{11}H_{15}NO_3$, is a compound differing from acetphenetidin (phenacetin) in that the acetic acid group, is replaced by the lactic acid group, $(CH_3\ CHOH\ CO)$

It is prepared by heating lactic acid and p-phenetidin, in molecular proportions at 180 C. (356 F) until all the liberated water is expelled, and crystallizing the product from hot water

It occurs in small colorless crystals or as a white powder melting at 117° to 118 C. (242.6 to 244 4° F) odorless and slightly bitter It is soluble in 330 parts of cold water in 55 parts of boiling water and in 8 5 parts of alcohol producing neutral solutions.

If 0 1 Gm. is boiled for a minute with 1 Cc. of concentrated hydrochloric acid then diluted with 10 Cc. of water and filtered the addition of 3 drops of a 3 per cent. solution of chromic acid to the cooled filtrate gradually develops a ruby red color If 0 1 Gm of lactophenin is boiled with 10 Cc. of water and the solution filtered after cooling the filtrate turns turbid on the addition of bromine water After hydrolysis with concentrated hydrochloric acid lactophenin gives the indophenol reaction with phenol and chlorinated lime Any slight residue which may be obtained by incinerating lactophenin should not, after solution in dilute hydrochloric acid, give a reaction with hydrogen sulphate.

Its incompatibilities are the same as those of acetphenetidin (phenacetin)

Actions and Uses—The effects of lactophenin are similar to those of acetphenetidin (phenacetin), over which is possesses the advantage of greater solubility in water

Dosage—0 5 to 1 Gm (8 to 15 grains), in wafers or capsules

Manufactured by Chem Fabrik, vorm. Goldenberg, Geromont & Co German patents Nos. 70 250 and 90 595

LAMINOIDS FERRUGINOUS (NASCENT)

Each tablet contains iron sulphate and sodium bicarbonate in quantities equivalent to those of pilulæ ferri carbonatis (Blaud's pills) but the two salts are separated into two layers so that the formation of ferrous carbonate will occur only when the tablets are moistened. An excess of bicarbonate is present to neutralize the acid in the stomach.

Dosage—The same as Blaud's pills

Prepared by Schieffelin & Co., New York. U S trademark No 38 384

LENNIGALLOL

PYROGALLOL TRIACETATE TRIACETYLPYROGALLOL

Lennigallol, $C_6H_3(CH_3CO_2)_3=C_{12}H_{12}O_6$, is triacetylpyrogallol obtained by replacing the hydroxyl groups of pyrogallol with acetyl groups

It is prepared by boiling 10 parts of pyrogallol, 1 part of sodium acetate and 25 parts of acetic anhydride for 2 hours, and washing the crystalline product on a filter with water

It is a white, crystalline powder melting at 165° C (329 F) It is insoluble in water, but soluble with decomposition in warm aqueous alkalies

It is incompatible with alkalies, strong acids and oxidizing agents

Actions and Uses—Lennigallol is said to be non-poisonous and non-irritating, but a mild and painless corrosive.

It is introduced as a substitute for pyrogallol in psoriasis, lupus, acute and subacute eczema of children and other skin diseases

Dosage—In 5 to 10 per cent ointment with zinc oxide

Manufactured by Knoll & Co Ludwigshafen a. Rh. German pat No 105 240

LIQUOR TRITICI

LIQUOR TRITICI CONCENTRATUS

A solution of which each Cc. (15 minims) is said to represent 1 75 Gm (27 grains) of triticum repens in a menstruum containing 23 5 per cent. of alcohol

It is made by exhausting the drug with water concentrating the percolate *in vacuo*, and preserving the product by the addition of 23 5 per cent. of alcohol

Dosage—4 Cc to 16 Cc (1 to 4 fluidrams) at intervals of from two to four hours

Prepared by Parke, Davis & Co, Detroit, Mich

LITHIUM ICHTHYOL

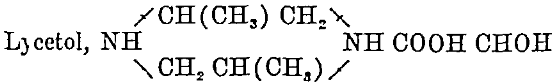
A lithium derivative of ichthyol

It is a dark brown mass somewhat more consistent, but otherwise resembling ammonium ichthyol in appearance

Actions and Uses—It is an antiseptic and bactericide It is recommended as a wound antiseptic and in syphilis

Manufactured by the Ichthyol Co Hamburg (Merck & Co New York)

LYCETOL



$$\text{Lycetol, NH}\begin{matrix}\diagup CH(CH_3)\ CH_2 \diagdown\\ \\ \diagdown CH_2\ CH(CH_3)\diagup\end{matrix}\text{NH COOH CHOH}$$

CHOH COOH $= C_{10}H_{20}O_6N_2$, is a tartrate of a methyl derivative of diethylenediamine (piperazine)

It is prepared by the distillation of glycerin with ammonium chloride or bromide reduction of the dimethylpyrazine (isolated from the distillation products) with metallic sodium and converting the base so obtained, after purification into the tartrate

It is a white odorless powder melting at 250 C (482° F) anhydrous but slightly hygroscopic. It is easily soluble in water forming agreeably acidulous solutions

It is incompatible with alkalies which liberate the insoluble free base.

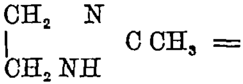
Actions and Uses —Lycetol is claimed to be a serviceable diuretic and uric acid solvent It is said to be free from disturbing effects on the stomach and to be well tolerated for long periods

Dosage —1 to 2 Gm (15 to 30 grains), well diluted, and preferably in carbonated water, sweetened with sugar if desired

Manufactured by Farbenfabriken, vorm Friedr Bayer & Co, Elberfeld Germany (Continental Color & Chemical Co., New York) U S patent No 528,018 U S trademark No 24,722.

LYSIDIN

ETHYLENE-ETHENYLAMIDINE METHYLGLYOXALIDIN
AETHYLENETHENYLDIAMIN

Lysidin, 
$\begin{array}{l}CH_2 \quad N \\ | \qquad\qquad C\,CH_3 \\ CH_2\,NH\end{array}$ $= C_4H_8N_2$, is a monatomic base derived from ethylene diamine

It is prepared by subjecting ethylenediamine hydrochloride and sodium acetate to dry distillation decomposing the hydrochloride of the new base with concentrated potassium hydroxide and crystallizing

It forms small, colorless, very hygroscopic needles, melting at 105 to 106° C (221 to 222 8 F) It is very soluble in water and in alcohol forming alkaline solutions It is also soluble in chloroform but insoluble in ether It forms a very soluble salt with uric acid.

It should form a clear and colorless solution and give the usual alkaloidal reactions.

Being a strong base it is incompatible with acids and with the salts of many metals and of the alkaloids which it decomposes

Actions and Uses —Lysidin is said to be a diuretic and is recommended as a uric acid solvent on the theory that, because it forms a very soluble salt with uric acid, it will facilitate the elimination of that substance It is claimed that it is superior to piperazine

It is recommended in gout, lithiasis and the various forms of the so-called uric acid diathesis

Manufactured by Farbwerke vorm Meister Lucius & Bruening Hoechst a. M. (Victor Koechl & Co., New York)

MERCUROL

MERCURY NUCLEINATE

Mercurol is an organic compound of mercury with nucleinic acid from yeast, containing 10 per cent of metallic mercury.

It is prepared by adding a solution of mercuric chloride to an alkaline solution of nuclein, containing an excess of alkali precipitating the resulting nucleinate of mercury by the addition of alcohol and a concentrated solution of a neutral salt (sodium chloride), separating the precipitate, washing and drying it.

It is a brownish white powder, soluble in water especially in warm water insoluble in alcohol Its watery solution has a distinct metallic taste, a weak alkaline reaction, and is not precipitated by alkalies, nor by albuminous liquids.

The mercury in this preparation resists the action of hydrogen sulphide to a marked degree.

Actions and Uses —Mercurol does not coagulate albumin, it has marked bactericidal power and possesses the pharmacologic action of soluble mercury compounds

It is recommended as a local antiseptic application and as an antisyphilitic remedy

Dosage —0 03 to 0 12 Gm (½ to 2 grains)

Manufactured by Parke, Davis & Co, Detroit, Mich. U S patent No 637,355

MESOTAN

ERICIN

Mesotan, $C_6H_4\,OH\,COO(CH_2\,O\,CH_3) = C_9H_{10}O_4$, is the methyl-oxymethyl ester of salicylic acid, analogous to wintergreen oil

It is prepared by the action of chlormethyl ether on salicylates thus $C_6H_4\,OH\,COONa + CH_2Cl\,O\,CH_3 = NaCl + C_6H_4\,OH\,COO(CH_2\,O\,CH_3)$

It is a clear yellowish faintly aromatic, oily fluid sp gr 1 2 at 15 C. (60 F) and boiling at about 162 C (323.6 F) It is difficultly soluble in water but readily soluble in the usual organic solvents and miscible with oils in all proportions. Above 100 C. (212 F) it is decomposed yielding salicylic acid, formaldehyde and methyl alcohol and it is likewise decomposed to a certain extent by moisture in the air

Its watery solution gives a violet color with ferric chloride and after heating or exposure to moisture it responds to the usual tests for formaldehyde. Concentrated sulphuric acid colors it red.

It should be kept in a cool place and preserved dry in well stoppered bottles

Actions and Uses —The action of mesotan is similar to that of oil of wintergreen, but it is more irritating to the skin

Dosage —Being quite irritating when applied pure to the sensitive skin, it is employed diluted with an equal volume of olive oil, and without friction Simple application to the affected part, which need not be covered, or, if so, only slightly, suffices to give prompt relief

Manufactured by Farbenfabriken vorm Friedr Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co New York) U S patent No 700,018.

METHAFORM

A name applied to chlorbutanol (which see)

Manufactured by F Stearns & Co, Detroit, Mich. U S trademark.

MIGRAININ

A mixture of antipyrine 85 parts, caffeine 9 parts and citric 6 parts.

It is a white powder soluble in 2 parts of water

It is incompatible with acids alkalies and metallic salts

Actions and Uses —It is antipyretic and analgesic, combining the actions of its components

Dosage —0 4 to 1 Gm (6 to 15 grains) in powder, cachets or tablets, the dose being repeated once or twice during the day

Manufactured by Farbwerke vorm Meister Lucius & Bruening Hoechst a M (Victor Koechl & Co., New York) German patent No 26 429

NEUROCAINE

BILLETS OF COCAINE, SCHIEFFELIN

Each billet contains cocaine hydrochloride 0 05 Gm (1/12 grain) without excipient. The billets are ⅛ inch long, 1/20 inch in diameter and very soluble

Neurocaine is used for pressure anesthesia or as a local anesthetic in dental practice

Prepared by Schieffelin & Co, New York. U S trademark, No 43,837

NEURONIDIA

Elixir Diethylmalonylurea, Schieffelin

An elixir said to contain in each 8 Cc. (2 fluidrams) 0 26 Gm (4 grains) of veronal (diethylmalonylurea in a menstruum containing 35 per cent. of alcohol, with aromatics

Dosage —(8 to 16 Cc) (2 to 4 fluidrams)

Prepared by Schieffelin & Co, New York U S trademark No 44 141

NUTROSE

CASEIN-SODIUM SODIUM CASEINATE

Nutrose is a sodium salt of milk casein, containing 65 per cent. of proteids

It is prepared by dissolving moist casein freshly precipitated from skimmed milk and washed with water in solution of sodium hydroxide, evaporating the solution to dryness *in vacuo* powdering the residue, washing it successively with alcohol and ether, and drying

It is a coarse, white odorless and tasteless powder forming a turbid, adhesive solution with water having an alkaline reaction toward litmus but being acid toward phenolphthalein

Incinerated on platinum foil it evolves vapors similar in odor to burning horn and leaves at least 3 per cent. of a white non volatile residue which has an alkaline reaction and colors the Bunsen flame yellow Casein can be detected by the biuret reaction.

It is incompatible with acids.

Actions and Uses —Nutrose is recommended as a nonirritant nutrient in wasting diseases such as the cachexias in carcinoma, anemia, diabetes, etc, and in acute and chronic febrile ailments, such as pneumonia, typhoid fever and tuberculosis

Manufactured by Farbwerke vorm. Meister Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York) German patent No 85 057

(To be continued)

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SATURDAY, NOVEMBER 3, 1906

THERAPEUTIC INOCULATION OF BACTERIAL VACCINES

The third course of lectures on the Herter foundation at the Johns Hopkins Medical School, given by Sir Almroth E Wright, has evoked unusual interest among those who heard the lectures The subject of the lectures was "The Therapeutic Inoculation of Bacterial Vaccines and Its Application in Connection with Bacterial Disease" The lectures were profusely illustrated with charts and diagrams, but were delivered without notes

Dr Wright's visit to this country was a notable event. As he lectured not only in Baltimore, but also in Toronto, Washington, Boston, New York and Philadelphia many of the profession fortunately heard him expound with great simplicity, vigor and clearness the results of his remarkable studies of immunity and their practical application

It is less than four years since the phenomena of opsonic immunity were first clearly revealed by the work of Wright and his assistants, but it is already apparent that the new fields thus opened to investigation are of the highest scientific and practical importance,[1] and it is incumbent on the physician and surgeon to acquaint himself with the principles and methods of the new treatment by bacterial vaccines, although the application of the treatment should be entrusted only to those especially trained as immunisators

It is possible here to indicate only briefly the general scope of the lectures delivered in Baltimore and to touch on a few special points In the first lecture Dr Wright subjected to a rapid critical review various existing methods of treating bacterial infections, as the expectant treatment, the use of antiseptics, the attempt to extirpate infected foci, efforts to increase the supply of lymph to areas of infection, antitoxic and antibacterial sera, etc, and he then considered the protective substances in the blood, dwelling mainly on those called "opsonins" which by combining with bacteria, make them an easy prey to leucocytes Skepticism was expressed concerning the therapeutic value of antibacterial as distinguished from antitoxic sera, such benefit as the former may occasionally exhibit being attributed to their action as vaccines through the undesigned and uncontrollable presence of bacterial poisons, as is illustrated by Chantemesse's antityphoid serum[2]

It was pointed out that the therapeutic efficacy of measures to increase the flow of lymph to infected areas, as by fomentations, the Finsen light treatment, Bier's hyperemia, etc, depends largely on the opsonic content of the blood, which varies much in different cases, which can be accurately measured, and which, in suitable cases, may be increased by bacterial vaccination

In the first and second lectures Dr Wright discussed such topics as the negative and the positive phases of immunity supervening on the inoculation of bacterial vaccines, the conditions under which pathogenic bacteria multiply in the infected organism, the activities and the inactivities of the machinery of immunization in different classes of bacterial infection, discriminating on this basis the strictly localized and the systemic infections, the methods of bacterial inoculation and the principles which should determine the administration of a vaccine and the propriety of intervention in aid of Nature's method of cure An imposing body of verifiable facts, illustrated by curves plotted from actual cases, was presented which made it clear that the quantitative determination of the protective substances, particularly the opsonins, of the blood and of infected areas in the course of infectious diseases affords information of the greatest value for diagnosis, prognosis and treatment Especially instructive were opsonic curves illustrating negative and positive phases resulting from autoinoculation in tuberculosis and other infections in consequence of physical and mental exertion, massage, surgical operation, menstruation and other circumstances, the relationship of such phases to the constitutional symptoms, and the diagnostic and therapeutic inferences to be drawn from these events

In the third lecture were presented the results which have been achieved in the treatment of bacterial diseases by means of bacterial vaccines, and in general the field of application of this therapeutic procedure The most numerous and the best curative results are obtained in localized chronic infections, such as many staphylococcus infections (furunculosis, sycosis, acne) and certains forms of tuberculosis, also in certain localized infections with the pneumococcus, the gonococcus, the streptococcus, the colon bacillus and other bacteria Even in certain systemic infections where the machinery of immunization makes default, there is opportunity to intervene successfully by subcutaneous injection of bacterial vaccines, as was exemplified strikingly by a case of infectious endocarditis and several cases of Malta fever

Of fascinating interest was the fourth lecture devoted to a full demonstration of the technical procedures which have been developed with such wonderful ingenuity by Dr Wright for the estimation of phagocytosis, opsonins and other antibodies and for the preparation of bacterial vaccines To those desiring to acquire the technic great assistance was afforded by the daily laboratory demonstrations by Dr G W Ross, a co-worker who accompanied Dr Wright A fifth lecture full of practical interest was on studies of coagulation of the blood and their application

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[1] The admirable Middleton Goldsmith lecture on Phagocytosis and Opsonins by Professor Hektoen, one of the leading and most productive workers in this field gives an excellent summary of existing knowledge, with the addition of new facts relating to this subject. The Journal A. M. A., May 12 1906

[2] A. E. Wright The foundations of Serum Therapy, Clinical Journal, May 12 1906

Although a vast amount of work remains to be done before we can grasp its full import, it is already apparent that the message which Dr Wright brings to the medical profession is comparable in its practical importance to that of Pasteur, of Koch, and of Behring The lectures will surely stimulate laboratory work in this country in the field which he has opened For those thoroughly trained in the new methods there is a career of great service to physicians and surgeons, and it is most desirable that our larger hospitals should make provision for such experts in immunization

THE NATIONAL CONTROL OF LEPROSY

Reference was made a few weeks ago[1] to the care and ultimate disposition of foreign-born lepers The suggestion was then made that the Federal Government should make some additional provision for their deportation The unfortunate circumstances surrounding the death of the Syrian leper at Pickens, West Virginia, and the dilemma in which he and the authorities of two states had been placed prior to his death, again recalls the great need of adequate means of dealing with the disease in this country

The question is also of moment because more than one-half of the lepers in the United States are native born According to the report[2] of the Commission authorized by Congress in 1899 to investigate the origin and prevalence of the disease in the United States, there were 278 cases residing in the various states in 1902, the time of this report, and, of this number, 145 were native born Of the total number reported, only 72 were isolated at that time, being cared for in local institutions or isolated in their own homes under great disadvantages There was at that time only one state institution for the exclusive care of lepers Since then a colony has been established at Penikese Island, Massachusetts, where five lepers are segregated at great expense to the state

The problem is already of interest to 21 states of the Union, and in view of the rapid growth of our heterogeneous population, the other states may be confronted with it at any time There can be no doubt that leprosy is a communicable disease, although slow in manifesting itself in the individual Facts also seem to show that in countries where the disease is neglected it has a tendency to increase, while the opposite is the case where measures of prevention are practiced, as in Norway An increase has been observed in certain South American and other countries—to such an extent in the Argentine Republic that the president of that republic recently convoked a conference to study the development of leprosy and to adopt measures to combat it.

The prevention of leprosy should also receive the serious consideration of our national government, the preservation of the public health and the dictates of humanity and science demanding the national care and control of the leprous under ideal hygienic surroundings The necessity for immediate action is apparent to health authorities throughout the country, the Conference of State and Territorial Health Officers with the Public Health and Marine-Hospital Service having presented resolutions to that effect[3] A bill for the segregation of lepers was also introduced in the Fifty-eighth Congress It was passed by the Senate and favorably reported by the house committee on interstate and foreign commerce, but on the last day of the session, though brought up, it failed, through some misapprehension, to pass the House The government has already made provision for a thorough investigation of the disease, Congress having provided for the establishment of a leprosy investigation station within the leper colony on the Island of Molokai While an investigation of this character presents problems of unusual difficulty, yet it may be hoped that definite knowledge will in time be gained regarding the method of transmission, and it may be confidently predicted that an improved method of treatment will eventually be evolved Meanwhile, it is urged that lepers in the United States be placed under national supervision and that a national home be established for their care Such action would insure the speedy return of many of the alien cases to their native land, as they would be discovered in time to come within the provisions of the immigration law

Under the present system of care, involving isolation of small groups or single cases, the expense is out of all proportion to the care of other indigents of the state The opportunity for systematic study of the various types of the disease is lost, and the lack of facilities and the utter loneliness of the patients cared for in isolated prison-like leprosaria defeats the end for which segregation is practiced

A national leper home, located in a salubrious climate and provided with adequate facilities, would obviate these difficulties Experience in the past has taught that such an institution would in no way be a menace to the health of the community, no case having been contracted by an attendant of the Louisiana leper colony nor by any inhabitant of the neighborhood during the past ten years Life in such an institution, in addition to decreasing the danger of spread, would offer a larger field for study, and by providing sources of occupation and amusement would in a great measure relieve the absolute hopelessness of this otherwise hopeless class

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[1] Jour A M A Aug 11 1906
[2] Senate Document No 269

[3] Transactions of the Third Annual Con
Territorial Health Officers.

CAISSON DISEASE AND MEDICAL CERTIFICATES

The series of tunnel operations that are now being carried on in the neighborhood of New York City have furnished abundant opportunities for the study of that curious affection of the nervous system called by the workmen the "bends," but known in medicine as caisson disease, and which we recently discussed from another viewpoint[1] In addition to the necessity of gradual decompression, emphasized in our previous article, experience shows that a certain number of persons seem to have an idiosyncrasy for the disease and suffer from it under circumstances in which others have worked for long periods without any serious effects or even any signs of the pathologic conditions that prove so injurious and even fatal to their fellow-workmen

The underlying lesions of the disease consist of small lacerated areas in the central nervous system consequent on the expansion of gas at certain points Owing to the high pressure at which air is inspired, it exists within the body in a considerable degree of compression If this be suddenly relieved, as happens when a workman —without the precautions of the interlocking system— passes from the caisson to the outer air, then minute ruptures of the tissues of the central nervous system take place and small hemorrhages ensue, because the free air present is usually contained within small blood vessels, and if these lesions occur at important points lasting injury or death is the result In order to avoid such unfortunate consequences, strict medical examinations of the men to be employed have been required and a medical certificate demanded before the workmen are allowed to enter the caissons As the result of careful investigation in certain recent cases, it would seem that some workmen have succeeded in evading these regulations, though at awful cost to themselves Some of the strong, healthy men have been selling their medical certificates to other less robust individuals who either had actually been refused employment on the work or felt sure that they would be, and the consequences have been, as might be expected, very serious for the substitutes

The whole affair has furnished a striking reminder of the fact that medical certificates generally will probably have to be accompanied by photographs, as they are required to be by law in certain of the European countries, if they are to be of any value. If workmen will risk their lives in order to secure work in so dangerous a trade, in spite of the precautions that are taken to save those who are almost sure to succumb, it can be readily understood that medical certificates will be passed on much more freely when issued under other circumstances We are coming to a point where medical certificates are to be required of workmen much more frequently, both for their own protection and that of others entrusted to their care, than has been the case in the past Proper regulations, therefore, will have to be maintained to guard against this abuse of certificates or they may become the source of more harm than good

THE REQUIREMENTS FOR THE PRACTICE OF SURGERY IN HOSPITALS

In his presidential address before the Colorado State Medical Society,[1] Dr H G Wetherell discusses the so-called open hospital and certain abuses connected therewith He points out that "throughout the west the hospitals are open to all reputable practitioners of medicine, and any of them may send a patient to a hospital and undertake any surgical operation he chooses, regardless of his lack of skill or experience in performing such operation" That the privilege of the open hospital is subjected to great abuse and that surgery is practiced both in and out of hospitals by incompetent and inexperienced men are, of course, matters of common knowledge among physicians Dr Wetherell's frank discussion of the situation is additional evidence of the existence of a feeling that the time has come when steps must be taken toward regulation and reform

In view of the fact that under our present conditions any licensed physician may practice surgery if he so chooses, no matter whether or not he is in possession of the necessary training and ability, the question as to who is to be allowed to operate in a hospital must be decided by the hospital itself Of course, the practice in some places, now long continued, of unrestricted hospital privileges can not be abolished or reformed at once The reform must be brought about gradually, and Dr Wetherell suggests that the hospitals in a city might unite in referring questions of this kind to a general board of hospital councilors for discussion, advice and even final action Such boards might result in much good if placed on a firm basis We can see, for instance, that a careful statistical study on a uniform basis of the surgical operations and their results in the various hospitals in a city would afford much valuable information as to what steps ought to be taken in order to secure the best results Publicity would be a powerful factor in directing the attention of those most interested to the need for stricter regulation of surgery in the open hospitals

As pointed out by Wetherell, we have in Maurice H Richardson's address at the Portland session of the American Medical Association an excellent discussion of the great question as to who should practice surgery[2] This address should be studied by all who desire to learn the requirements necessary for a reasonably successful surgical practice as conceived by those best fitted to know. We hope that the important practical problems discussed by Richardson and by Wetherell may continue to receive increasing thought and consideration, so that before long more definite and exacting requirements for entrance on surgical practice may become established than is the case now. In this phase of the evolution of American surgery our hospitals play a rôle of great responsibility which our hospital authorities must be brought to realize more keenly than is now the case in many parts of the country.

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[1] The Journal A M A., Sept 1 1906

[1] Colorado Medicine October 1906 abstract in The Journal October 27 p 1403.

[2] The Journal A M A Oct 7 1905

X RAY DANGERS

Up to the present time the dangers of the x-ray have been largely believed to be confined to the accidental burns, at least in the ordinary therapeutic use of the agent. Of course, with long-continued and frequent exposures more serious results are admitted as possible, as in the well-known cases of certain operators and experimenters, such as those of Edison's assistant and the English expert, noticed in our London correspondence this week.[1] Dr. Edsall's paper, in the present issue of The Journal,[2] however, points out some perils that, even in the ordinary brief exposures, had not been generally anticipated. It may be that among the almost innumerable cases thus treated up to the present time there have been some serious accidents that should have been, but were not, credited to the ray, and Dr. Edsall's observations would certainly indicate such a possibility. Indeed, he gives testimony as to their actual occurrence. His experimental results, moreover, show a far more serious constitutional effect of this agent than had been generally suspected. It may be that we have sometimes been playing with fire in the use of this agent and have unconsciously caused pathologic conflagrations, so to speak. It is highly probable that in the vast majority of cases no harm can result, but the parallel with anesthetics is an apt one and seems to fit the case thoroughly. The recent death of a Pennsylvania capitalist while undergoing an application of the x-ray, whatever may have been the actual cause of death, is at least suggestive of caution in its use. There is also to be considered the question of the effect of the x-ray on the reproductive organs in causing sterility, as well as the possibility of psychic effect in some nervous cases, which may be even dangerous in rare instances. The beneficial effect of the ray in certain diseases is unquestionable and their value for surgical diagnosis is even better established. There is a great deal yet to be learned, however, as regards both its physiologic and its pathologic effects.

THE DEAD LINE IN SPORTS

Certain periodicals and magazines in Great Britain and in this country have been discussing the "dead line" in sports, i. e., the age limit beyond which certain sports must not be indulged in or serious consequences may result. It has been claimed, for instance, that football should not be played after 30 because of the danger of injury to the gradually hardening tissues of the adult after full growth has once been reached. The age limit for cricket in England and for baseball in this country was set down as 40, though it is confessed that some men can indulge in these sports with impunity after this age. It seems impossible, however, to determine any absolute limitation for individuals in this matter since all depends on the condition of heart and arteries, as well as the facility with which the necessary movements are accomplished. It is well-known, for instance, that England's greatest living cricket player continued to indulge in the game until after sixty, without either injuring himself or losing any of his skill. Not a few of our baseball players in this country have been fifty years of age before they gave it up, and yet maintained their reputations for skilful playing until the end of their baseball career. The "dead line" in sports, however, is an individual proposition and does not depend on set rules or supposed age limitation. Provided the indulgence in sport is kept up more or less continuously, a man's own feelings in the matter are likely to provide better data as to when such exertion must be given up than any hard and fast rules. On the other hand, there is distinct danger for a man who has been a good player at a particular sport in his younger years if he should attempt to indulge in it after a long interval during which he has given no time to it. This is where the most serious danger lies. Such a man knows nothing of his limitations, and in attempting to accomplish as much as when he was younger, very easily overdoes the exertion that his present condition of lungs and heart and arteries will permit. Instead of discouraging indulgence in out-door sports after middle life by the setting of artificial limitations, we should rather encourage them, and especially emphasize the advisability of maintaining unimpaired to a rational degree the capacity for exercise acquired by the individual as a young man.

CHINA AND THE OPIUM TRAFFIC

Hard on the condemnation of the opium traffic by the British parliament, noted in The Journal, Aug. 22, 1906, comes the announcement that the Chinese government has issued an edict making provisions for the suppression of the use of opium in its dominions. In this it follows the example given by Japan, which, both in its own territory and in its outlying dependencies, has made the use of opium a matter of strict legal restriction for a long time past, and of Australia which has had a rigid law since the beginning of the present year. England will, therefore, be helped in the right way toward abolishing the opium business, so profitable in the Indian revenue, by the loss of its principal market—that is, if the Chinese government is honest and can enforce its laws. It has been hinted by correspondents in the public press that it only intends to establish a profitable monopoly for itself, but this, perhaps, may be doubted. The evil of opium using is probably greater in China than anywhere else in the world and it follows the Chinese wherever they go and contaminates other races. It is really a world question and one in w [illegible] every step of progress should be welcomed by every well wisher of humanity Opium as a medicine is invaluable, but its non-medicinal use is a curse wherever it exists

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[1] See page 1498.
[2] See page 1425.

THE INDEX MEDICUS

It is reported that the Carnegie Institution is considering the discontinuance of the *Index Medicus* on account of lack of financial support from the medical profession It is to be regretted that such a reason exists, there should be sufficient support for the *Index,* now the price has been made moderate The *Index Medicus* holds a place by itself among periodicals It is the one accurate and complete bibliography of current medical literature, and its discontinuance would be a world-wide misfortune

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Medical News

ALABAMA

College Opens—The Birmingham Medical College opened for its thirteenth annual session, October 3, with addresses by the dean, Dr Benjamin L Wyman, Dr E D School and Dr E P Hogan, secretary of the college The only faculty change noted is the appointment of Dr E P Hogan, who succeeds Dr John C La Grande, deceased, as secretary of the faculty

Personal.—Dr Rhett Goode has been elected dean of the Medical College of Alabama, Mobile, vice the late Dr George A Ketchum——Dr Henry A Moody and wife, Mobile, had a narrow escape from death in the recent storm and flood which devastated the Gulf Coast——Dr T L Colwell has been appointed physician at the furnaces of the Tennessee Coal, Iron and Railway Co, Bessemer, vice Dr George A Hogan

ARKANSAS

Diphtheria—On account of an epidemic of diphtheria, the public school of Harrisburg has been ordered closed temporarily, and children have been forbidden to attend public gatherings

Runyan Resigns Secretaryship—At the meeting of the State Board of Medical Examiners held October 9, the resignation of Dr Joseph P Runyan, secretary of the board, was received, and Dr Fred T Murphy, Brinkley, was elected in his stead. As a mark of the esteem in which he is held by the members of the board, Dr Runyan was presented with a gold headed cane, which was inscribed, "Arkansas State Board of Medical Examiners to Dr J P Runyan, an Exemplary Secretary, 1906"

Medical Colleges Open—The Medical Department of the University of Arkansas, Little Rock, opened for its regular term October 1 The opening address was made by Dr Edwin Bentley, dean of the faculty——The formal opening of the College of Physicians and Surgeons, Little Rock, and the Little Rock Sanitarium was held October 1, and the college opened for its regular work October 3 The opening addresses were made on that day by Dr William C Dunaway and Dr Joseph P Runyan, dean of the faculty, presided.

CALIFORNIA.

Hospital Burns.—The Military Hospital at the Presidio of Monterey, a large two story frame building, was totally destroyed by fire October 13 Although the building was full of patients, some of whom were critically ill, all were removed in safety The loss will probably amount to $50,000

Faculty Changes—At the annual meeting of the faculty of the University of Southern California, College of Medicine, Los Angeles the resignations of the dean, Dr Walter Lindley, and of the secretary Dr William D Babcock, were received and accepted The vacancies were filled by the election of Dr William D Babcock as dean, and Dr George H. Cress as secretary The resignation of Dr Lindley was due to the pressure of other duties, and a vote of thanks was tendered him for his efficient services during his term of office.

Personal.—Dr Jonas J Moyer has been elected health officer of Mayfield——Dr Herbert F True, Los Angeles, has returned after a year abroad——Dr Edwin Bunnell, San Francisco, was recently operated on for appendicitis at the Scobie Sanatorium——Dr Henry E Sanderson has been elected a member of the Stockton board of education——Dr Charles G Stivers, Los Angeles, has gone to the Atlantic seaboard.——Dr and Mrs William E Hopkins, San Francisco, left for Europe, October 15——Dr Joseph A Champion, Colton, who suffered severe injuries in a bicycle accident recently, is now convalescent.——Dr and Mrs Emmet Rixford, San Francisco, are taking a trip to the Atlantic coast

COLORADO

Typhoid Fever—At the meeting of the Denver County Medical Society, October 2, the general opinion prevailed that the alarming number of typhoid fever cases in the city was directly due to contaminated water, and that unless some effective work is done by the city health department and the water supply companies before next summer, a still greater number of cases may be expected——It is reported that Leadville is on the verge of an epidemic of typhoid fever

The Colorado Medical Legislative League.—The physicians of Colorado have an organization for political purposes with the above name The league is non partisan, and has considerable influence which is used openly but effectively when necessary A circular has just been sent to the physicians of the state which reads as follows:

> *Dear Doctor*—While it would be folly for the medical profession to enter partisan politics as an organization our sense of professional duty to the public obligates us to support candidates, irrespective of party affiliation who favor the protection of the public health through the enactment of wholesome medical legislation.
>
> The political influence of the doctor has been overlooked by the managers of partisan politics but there is now a general awakening to our power as a political factor at the polls
>
> Our support, and the election of men of different party affiliations, who favor enlightened legislation on the subject of public health, will present to them the most potent of object lessons
>
> We should strongly support those candidates who will labor for such legislation
>
> We enclose a list of candidates who have in the past, demonstrated that they are worthy of our support. We urge on you the necessity of exerting your strongest efforts actively in their behalf.
>
> Do not be satisfied merely with casting your own vote but in your daily rounds do active campaign work and secure the support of as many voters as possible.
>
> Every doctor should be able to secure at least a half dozen votes in behalf of the candidates whom we find worthy of support. In this sort of work it is necessary to favor men as such, irrespective of party affiliations.
>
> The time for action is short. Your efforts should be quick and vigorous

CONNECTICUT

Infectious Diseases—During September there were reported to the State Board of Health 14 cases of measles in seven towns, 49 cases of scarlet fever in 17 towns, one case of cerebrospinal fever, 173 cases of diphtheria in 20 towns, 23 cases of whooping cough in 12 towns, 201 cases of typhoid fever in 54 towns, and 23 cases of consumption in 10 towns

Personal.—Dr James M Keniston has resigned as superintendent of the Hartford Hospital and has been appointed to a position on the staff of the Connecticut Hospital for the Insane, Middletown——Dr and Mrs Frank H Whittemore, New Haven, have returned from Scotland——Dr Steven J Maher, New Haven, has returned from attendance at the International Convention on Tuberculosis, The Hague——Dr Timothy T Cohane, New Haven, has returned from Germany

GEORGIA.

Personal.—Dr Marion A. Born, Lawrenceville, is reported to be seriously ill with septicemia, contracted during a surgical operation——Dr Hansell Crenshaw, Atlanta, suffered a concussion of the brain by being thrown from a street car in Atlanta, September 26

Election of Officers—The Fifth District Medical Society met in Atlanta, October 16, and after an address by Dr Henry H. Martin Savannah, president of the Medical Association of Georgia, the following officers were elected Dr John C Olmsted, Atlanta, president, Dr E Bates Block, Atlanta, vice president, and Dr Elias W Ragsdale, Covington, secretary

College Opens—The seventy fifth annual session of the Medical Department of the University of Georgia, Augusta, opened October 2 Dr William R. Houston was appointed lecturer on diseases of the nervous system and Eugene L. Johnson lecturer on medical jurisprudence The opening address was delivered by Dr Joseph E. Allen on "The Twentieth Century Doctor in the Making," in which he divided the making of the doctor into three periods First, that of primray education, second, that spent in medical college, and third, that devoted to active practice

ILLINOIS

Typhoid Fever—Typhoid fever is reported to the State Board of Health to be prevalent in 34 localities in the state in a more or less epidemic form

District Society Meeting—Dr F Whitfield Smith, Bloomington, councilor of the fifth district, has arranged for a meeting of the Tazewell County Medical Society for reorganization, at Pekin, November 8

Commends Supervisors.—The Illinois State Board of Health has commended the action of the board of supervisors of Sangamon County in providing for the isolation of tuberculous patients in hospitals by the purchase of $200 worth of tents.

Military Tract Meeting—The Military Tract Medical Association held its sixty seventh annual session at Macomb, October 18 The following officers were elected Dr John P Roark, Bushnell, president, Drs Samuel Stremmell, Macomb, and Ernest E. Davis, Avon, vice presidents, and Dr Franklin E Wallace, Monmouth, secretary and treasurer (re elected)

Smallpox.—The smallpox situation at Wyoming is becoming serious On October 25 21 cases were reported to be present ——Moline reports 3 cases of smallpox and the health commissioner has instructed the superintendent of schools to notify school children in the infected district that they must be vaccinated or remain away from school.——Smallpox is reported from Chillicothe.

State Charities Conference.—The eleventh annual session of the Illinois State Conference of Charities was held in Chicago, October 24, 25 and 26 The more important subjects discussed were the same as those at the Springfield meeting of the week before (see page 1384) The plan of converting all public asylums in the state into state institutions was approved by the speakers and by the conference The establishment of a village for epileptics and a sanatorium for consumptives was also advocated. The conference authorized the appointment of five commissioners to act in conjunction with the State Board of Charities during the coming session of the legislature in procuring legislation favorable to the program outlined by the board

Chicago

Policeman Sells Rheumatism Cure—B H Reed, a policeman, is said to have been fined $100 and costs, October 26, for practicing medicine without a license The prosecution was instituted by the attorney for the State Board of Health, who claimed that Reed sold a medicine known as "Reed's Peerless Rheumatism Cure"

Deaths of the Week.—During the week ended October 27, 505 deaths were reported from all causes, 25 more than for the previous week and 35 more than for the corresponding week of 1905, equivalent to an annual death rate per 1,000 of 12 85 Pneumonia led the death causes with 69, followed by consumption and violence (including suicide), each with 49, and acute intestinal diseases with 43, heart diseases with 41, nephritis with 35, and cancer and nervous diseases with 24 each Diphtheria caused 12 deaths and scarlet fever and typhoid fever each 8

Pasteur Institute Report.—The Chicago Pasteur Institute announces a summary of the results of the preventive inoculation against hydrophobia attained since its inauguration in 1890 A total of 2,775 patients have received the anti rabic treatment, of these, 2,474 were bitten by dogs, 100 by horses, 84 by cats, 29 by cows, 23 by skunks, 9 by calves, 9 by wolves, 5 by pigs, 4 by coyotes, 4 by mules, 2 by burros, and one each by a rat and a sheep Hydrophobic human beings infected 31 patients. Of the patients, 1,406 had received severe and multiple bites on the hands and wrists, 584 on the leg and thigh, 388 on the face and head, 359 on the arms and 42 on the trunk. Only 7 deaths were reported, giving a mortality rate of 0 25 per cent For reasons unknown seven individuals abandoned treatment, two of whom subsequently died from hydrophobia

INDIANA.

Ground Broken for Hospital—On October 15 Governor Hanley turned the first shovelful of earth in the excavation for the foundation of the new State Hospital for the Insane, Madison

Physicians' Club Meets—The Elwood Physicians' Club held its annual meeting October 9 The following officers were elected President, Dr Jabez H Millikan, vice president, Dr Robert F Marshall, and secretary treasurer, Dr Frank F Mendenhall

Burning Leaves a Cause of Illness—The Indiana State Board of Health has decided that the smoke from burning leaves is a cause of eye and throat diseases among children, as well as a nuisance and an annoyance The local health officers have been instructed to give notice to the people not to burn leaves

Work in the Epileptic Village.—At the state epileptic village, Newcastle, two new buildings are being erected, the railroad has completed the siding to the site, and work has begun in earnest. The buildings under erection are to be used, one for the superintendent and the other for a dormitory to accommodate about 50 patients

Physician Loses License—The State Board of Medical Registration on October 12 revoked the license of George L Dickerson, Terre Haute, convicted of having allowed Robert J Dickerson, his brother, to use his diploma and certificate for practice in Logansport Dr Dickerson will, it is reported, appeal the case to the Superior Court of Vigo County

Communicable Diseases—Smallpox, diagnosed as "Cuban rash," has made its appearance in Richmond——Diphtheria is said to be prevalent in Van Buren Township, Brown County, where 40 cases and 4 deaths have been reported.——The epidemic of diphtheria, which has been raging in Delaware County for three months, is reported to be abating

Personal.—Dr James M. Larimore, Greenfield, was assaulted in his office October 11, by Samuel Seward, who was angry because the physician had not responded to a call at his house——Dr Harvey Voyles, Bedford, fell from a ladder from the second story of his house, October 18, breaking both of his legs at the ankle——Dr F Will Krueger has been appointed city physician of Richmond to succeed Dr Allen L Bramkamp ——Dr Joseph F Gillespie has been appointed local surgeon of the Vandalia Railroad, at Greencastle, vice Dr Ezra B Evans, resigned——Dr Walter N Fowler, Bluffton, who was a member of the Wellman polar expedition, arrived at his home from the Arctic regions, October 18

KENTUCKY

Must Report Tuberculosis—The Board of Public Safety, Louisville, on October 18, issued an order requiring physicians of the city to report all cases of tuberculosis to the health office

Correction in State Meeting Report—In the report of the meeting of the Kentucky State Medical Association, page 1407, Dr Arch Dixon is reported to have said "An early resort to external urethrotomy will greatly *hasten* the number of cases, etc" He asks us to announce that this should read "will *greatly lessen*, etc"

Tuberculosis Hospital for Louisville.—By the will of the late Dr John A Ouchterlony, his estate, valued at $100 000, was devised to the Rev Charles P Raffo and two other residuary legatees that a tuberculosis hospital for Louisville might be founded The will was contested, but has now been compromised, and the bequest thus made available for the original purpose.

Personal.—Dr Mandeville Thum, Louisville, in reported to have been adjudged insane by the criminal court, October 15 ——Dr Benjamin Letcher, Henderson, who was stricken with paralysis, October 15, is reported to be in a critical condition ——Dr Walter R. Francis, Bowling Green, was seriously bruised about the head and face in a runaway accident, October 11

MARYLAND

Baltimore

Added to Medical Staff—The following have been added to the staff of the Church Home and Infirmary Drs W S Thayer, Lewellys F Barker, Julius Friedenwald, Josiah M Slemons, Richard H. Follis and John Ruhrah During the summer the hospital averaged 50 patients daily, and it was impossible to accommodate all applicants Early next year an addition will be made to the building

Personal.—During the absence of Dr Henry Hurd in Europe Dr Herbert Norton will fill his place as superintendent of the Johns Hopkins Hospital——Dr Howard A Kelly has returned from his summer vacation in the Canadian woods and abroad ——Dr Hodge A Newell has resigned from the house staff of the City Hospital to commence practice in Maplesville, N C, his native town——Dr Edward Grempler has been elected president of the Southwest Baltimore Improvement Association——Prof D M R. Culbreth has resigned the chair of materia medica at the University of Maryland School of Medicine and Prof J E Gichner will deliver the lectures on that branch

NEBRASKA

Fire in Medical School.—Fire broke out in the basement of Creighton Medical School, October 10, and for a time threatened the entire building, but by strenuous efforts the fire department managed to confine it to the basement and first floor The damage is estimated at about $1,000, fully covered by insurance

Diphtheria—Diphtheria has broken out in the Walnut Hill district, Omaha, and the Health Commissioner has warned the citizens of that district regarding the disease On October 20 the commissioner sent a circular to every physician in Omaha requesting coöperation with the health department in stamping out the disease

Personal.—Dr J M Alden has retired from the superintendency of the Norfolk Hospital for Insane, and Dr George A Young Lincoln, has assumed charge of the institution——Dr Harrison A Wigton, Omaha, has been appointed assistant superintendent of the Nebraska Hospital for the Insane, Lincoln, vice Dr George A Young——Dr Claude W Mason, Omaha, has gone to Siam as a medical missionary, under the Presbyterian Board of Foreign Missions

NEW YORK.

Wertheim in Buffalo—Prof Ernst Wertheim of Vienna spent October 7 and 8 in Buffalo, the guest of Drs Joseph P F Burke and Max Keiser

Medical Library Association Election—At the annual meeting of the Utica Medical Library Association, October, Dr Frederick J Douglas was elected president, Dr Conway A Frost vice president, Dr Fred W Smith, secretary, Dr James E Gage, treasurer, and Dr Smith Baker, librarian

Buffalo Deaths—For the nine months ended September 30, 276 more deaths were reported in Buffalo than for the corresponding period of 1905 The increase in deaths is apparently due in a great measure to summer diseases, 301 more deaths having occurred in the summer months than in the corresponding months of 1905 There has been a slight falling off in the deaths from smallpox, scarlet fever and diphtheria, and a marked decrease in the deaths of children under 5 years of age

Personal—Dr Roswell Park, Buffalo, has been elected a member of the Association of French Surgeons He is said to be the fourth surgeon in the United States to become a member of this society——Dr A Wilson Dods, Fredonia, and Dr C H Richards Dunkirk, sailed October 7 for Europe——Dr Cornelius W De Baun, Fonda, was thrown from his carriage in a runaway accident, October 1, and sustained a compound fracture of the right leg above the ankle——Dr William M Gibson has been elected president, Dr Earl D Fuller, vice president, and Dr Andreid Sloan, secretary treasurer of the Medical Society of the Staff of St Luke's Hospital, Utica——Dr Theodore I Townsend for several years assistant physician at the Utica State Hospital, has resigned to accept a position as first assistant of the Dannemora State Hospital——Dr Leonard Saxer, Syracuse, has been appointed a member of the Board of Managers of the St Lawrence State Hospital, Ogdensburg, to fill an unexpired term——Dr Charles C Duryee has been elected president, Dr Edward J Wiencke, vice president and Dr Walter W Goddard, secretary of the medical staff of the Ellis Hospital, Schenectady

New York City

The Harvey Society Lecture—The second lecture in the Harvey Society course will be delivered at the New York Academy of Medicine, Saturday evening, November 3, at 8 30, by Prof C A Herter, on "The Common Bacterial Infections of the Digestive Tract and the Intoxications Arising from Them"

Library Presented.—The library of the late Dr Willard Parker, containing 4 000 volumes, was formally presented to the Medical Society of the County of Kings, October 16 The presentation was made by Dr Willard Parker, his son, who will be made an honorary member of the association

The Bulkley Lectures—Dr L Duncan Bulkley will give his eighth annual series of clinical lectures on diseases of the skin in the out patient hall of the New York Skin and Cancer Hospital on Second Avenue and Nineteenth Street, on Wednesday afternoons at 4 15 beginning November 7 The course will be free to the medical profession

Friction at Bellevue.—A full meeting of the board of trustees of Bellevue and the Allied Hospitals was held October 25, when the difficulties were discussed that have arisen between the superintendent Dr Armstrong and the members of the staff, who allege that the reform measures introduced by Dr Armstrong are in some instances too severe

New Home for Hospital—Invitations are out for the formal opening of the new building of the Manhattan Eye, Ear and Throat Hospital, October 30 The new building is seven stories in height and will have 141 beds On the fourth floor are 27 private rooms, where surgeons may treat their own patients At the old hospital 30,000 new patients were treated during the past year, and 120,000 visits of patients were registered

Contagious Diseases—There were reported to the sanitary bureau for the week ended October 20, 359 cases of tuberculosis, with 174 deaths, 194 cases of diphtheria, with 22 deaths, 121 cases of typhoid fever, with 25 deaths, 89 cases of scarlet fever, with 3 deaths, 61 cases of measles, with 4 deaths, 24 cases of whooping-cough, with 13 deaths, 11 cases of cerebro spinal meningitis, with 13 deaths, 20 cases of varicella, and 2 cases of smallpox—a total of 881 cases and 254 deaths

Personal.—Dr Timothy D Lehane, coroner's physician, is suffering from septicemia, due to an autopsy wound——Drs Earl W Phillips and Harry W Satchwell, internes at Bellevue Hospital, are ill with typhoid fever——Dr James E Kelly, who was severely scalded on his yacht several weeks ago, has been removed to his summer home at Bayville, L I——Dr William S Bainbridge was chosen honorary secretary of the First International Conference on Cancer, held in Heidelberg last month——Dr F G Emerson, Brooklyn, has returned from Europe

Hospital News—The Margaret J Plant pavilion for private patients, connected with St Luke's Hospital, was opened to receive patients October 18 The building, which has been completed at a cost of about $500,000, is eight stories in height, nearly a block in extent and contains private rooms for 65 patients——Stock aggregating $90,000 is to be issued for hospital purposes by the Board of Estimate Of this the new Fordham Hospital will receive $40,000 for furnishings, the Gouverneur Hospital, $20,000 for a new wing, and the new Harlem Hospital, $30,000——Dr George H F Schrader has proposed to give an addition to the Cancer Hospital at Hawthorne, known as Rosary Hill Home The building is intended to be an *entertainment hall for the patients and* visitors

NORTH CAROLINA.

Diphtheria Decreases.—The city health officer of Kinston reports that the diphtheria situation is very much improved and hopes very shortly to be able to release all patients at present under quarantine

Personal.—Dr William C Mebane, Mount Airy, is recovering from an attack of typhoid fever——Dr P L Murphy, superintendent of the State Hospital at Morganton, underwent operation at the Second Protestant Infirmary, Baltimore, October 18

Annex to State Hospital—The new annex to the North Carolina State Hospital for the Insane, Raleigh, will soon be ready for occupancy The building will have accommodations for 102 additional patients and will in a measure relieve the overcrowding of the institution, but it will be impossible to provide for several hundred outside the institution until after the meeting of the legislature in January next when it is hoped that provision for additional buildings will be made

OKLAHOMA

Insane Asylum Report.—The quarterly report of the Oklahoma State Insane Asylum, Norman, made October 2, shows that there were 523 patients in the asylum During the three months just past 68 patients were received, 30 discharged and 24 paroled

Would Prohibit Sale of Cocain and Morphin.—A bill will be asked to be enacted by the first state legislature prohibiting the sale of cocain and morphin without a physician's prescription. The bill is modeled on the statutes now in force in Missouri and Illinois

Hospital Items.—It has been suggested that Oklahoma City make an arrangement with the management of St Anthony's Hospital, whereby the facilities of that institution may be at the service of the city when required——Dr W A Fullington has been chosen president of the staff of Bethany Hospital, Oklahoma City, Dr Claudius B Bradford, secretary, and Drs John A Reck and Alexander B Baird, members of the executive committee——The Methodist Episcopal Church of Oklahoma and Indian Territory is about to take charge of Guthrie Hospital——Drs W M Turner, James L Lewis and David A Myers are erecting a modern hospital at Lawton to cost $8 000

OREGON

Infectious Diseases—An epidemic of typhoid fever is said to be raging in the southern part of Wasco County——Diphtheria has appeared among the school children of Portsmouth, where four cases are reported.

Must Report Tuberculosis—At a meeting of the Portland board of health, October 1, a resolution was adopted to make it compulsory on all physicians to make a report of patients afflicted with tuberculosis, in accordance with the requirements of the city ordinances

Eastern Oregon Physicians Meet.—The Eastern Oregon District Medical Society met in Pendleton, September 26, and elected the following officers President, Dr Jacob Prinzing, Ontario, vice presidents, Drs J A Geisendorffer, The Dalles, and A E King, Antelope, secretary treasurer, Dr Clark E Saunders, Union, Dr Grant W Gregg, Wallowa, member of the board of censors Drs Charles J Smith, Pendleton, and John A Reuter The Dalles, delegates to the state society, and Drs Lazier, Weston, and Charles W Thomas, Milton alternates The next session will be held at Radium Springs, Baker County

PENNSYLVANIA

Diphtheria—Diphtheria is said to be specially prevalent in the Second ward of Allegheny, in which 9 cases have recently appeared, with 2 deaths In other sections of the city 11 cases developed during the same period of time On account of the number of cases the department of health has closed the Sherman school

Hospital Items—The annex to the Oil City Hospital, erected at a cost of $25 000, has been completed The amount necessary for its erection was donated by an anonymous benefactor——A mass meeting was held recently at Lansford to encourage the movement for the establishment of a hospital in Panther Creek Valley——The Presbyterian Hospital in Allegheny will be partly under roof before cold weather sets in The building will cost $250,000

Alienists Meet—The semi annual meeting of the Association of Trustees and Physicians of State and Incorporated Hospitals for the Insane of Pennsylvania was held at the State Asylum, Philadelphia, and Thomas C Zimmerman trustee of The following officers were elected Dr Hugh B Meredith, superintendent of the State Hospital for the Insane Danville president, Dr Robert H. Chase, superintendent of Friends' Asylum, Philadelphia, and Thomas C Zimmerman, trustee of the State Insane Asylum for the Chronic Insane, South Mountain, vice presidents, and Dr Morris S Guth, superintendent of the State Hospital for the Insane, Warren, secretary The next meeting will be held at the State Asylum for the Insane, Norristown

Personal.—Dr Samuel C Seigle, Center Square, after practicing for 33 years, has retired——Dr Simon P Earnest, Delmont, who underwent an operation for appendicitis several weeks ago, has recovered——Dr Andrew B Gloninger, Lebanon returned from Europe October 7——Dr J Harvey Fronfield, Media entertained the Delaware County Medical Society at the Rose Tree Inn, Chester, October 11——Dr William C Meanor, Beaver, has been appointed oculist for the Pennsylvania Lines West——Dr and Mrs William H. Taylor, Irwin have returned from Europe——Dr Samuel M Todd Boverton who has been seriously ill, is reported to be convalescent——Dr Thomas C Stellwagen Media fractured his right forearm recently while on his power boat——Dr Frederick S Kaufman Lebanon who has been seriously ill, is reported to be much improved

Philadelphia.

Typhoid Cases—During the week ended October 19 93 new cases of typhoid fever were reported, an increase of 6 over the number reported for the previous week Cases are reported from every ward in the city

Course in Internal Medicine—Drs William E Hughes and Robert N Willson will conduct a series of postgraduate courses in internal medicine during the fall and winter in the wards of the Philadelphia Hospital Each course will comprise six weeks of bedside teaching

Personal.—Dr William N Angney, chief police surgeon, is reported to be critically ill with malignant disease of the stomach at the Pennsylvania Hospital——Dr S Lewis Zeigler has been elected executive medical officer of the Wills Eye Hospital and Dr John H Trinder, resident physician at Girard College——Dr David B Birney was thrown from his carriage in collision with a trolley car October 14, and badly bruised

WISCONSIN

Diphtheria Closes School.—The high school of Black River Falls was closed October 23 on account of diphtheria

Wertheim in Milwaukee—Dr Ernst Wertheim Vienna, has been the guest of Dr Gustav A Kletsch, Milwaukee

College Opens—The Wisconsin College of Physicians and Surgeons opened for its fourteenth annual session September 25 Dr A Hamilton Levings, president of the faculty, presided.

Should City Pay for Care of Consumptives?—The State Tuberculosis Commission has under consideration the advisability of commencing a friendly suit against the city of Milwaukee to determine whether or not that city can be compelled to segregate and care for its tuberculosis patients

Illegal Practitioner Fined.—Robert E Harter, claiming to be a "skin doctor," was arraigned in the district court of Milwaukee, October 8, charged with practicing medicine without a license, and is reported to have been fined $20 and costs The attorney for the State Medical Board prosecuted the case

Smallpox.—Five cases of smallpox were discovered in Two Rivers, October 18——The local health authorities of Manitowoc report the appearance of seven cases of smallpox in the northern section of Manitowoc County——A case of smallpox has appeared in the Mendota State Hospital for the Insane

Do Not Wish Names Mentioned.—At a meeting of the Calumet County Medical Society, held in Chilton it was resolved that the society should request the editors of all local papers circulating in Calumet County to refrain from mentioning the names of physicians in attendance in cases of illness or accident and that members of the society discontinue their cards of announcement in the public press

Personal—Dr Mark A. Bailey, Fennimore, has been appointed a member of the State Board of Medical Examiners, to fill out the unexpired term of Dr Frank P Klahr, Horicon, resigned——Dr August Sauthoff, Madison, has been elected assistant physician to the State Hospital for the Insane, Mendota——Dr James S O'Brien has been elected president, Dr George D Ladd, vice president, and Dr George W Fox, secretary treasurer of the St. Mary's Hospital Board, Milwaukee

GENERAL

Convention on Epilepsy—The National Association for the Study of Epilepsy and the Care and Treatment of Epileptics will hold its annual meeting in New Haven, Conn November 8, under the presidency of Dr Max Mailhouse of New Haven

New England Railway Surgeons to Meet—The New York and New England Association of Railway Surgeons will hold its sixteenth annual meeting at the New York Academy of Medicine, November 14 and 15, under the presidency of Dr Joseph P Creveling, Auburn, N Y On Wednesday morning there will be a symposium on shock including papers on "Shock from Anesthesia," "Shock from Traumatism," "Psychic Shock" and "Postoperative Shock" The secretary is Dr George Chaffee, 338 Forty seventh Street, Brooklyn

Light on Tuberculosis Congresses.—We are requested by the National Association for the Study and Prevention of Tuberculosis to publish the following note Notices have been sent to many physicians throughout the United States and are appearing in the medical and public press regarding an "American International Tuberculosis Congress," to be held in New York City, November 14 to 16 next and an association known as "The American Anti Tuberculosis League," which is to meet in Atlantic City next June at the time of the meeting of the American Medical Association It should be stated that the gathering in New York next November and the one in Atlantic City next June have no connection whatever with the International Congress on Tuberculosis authorized at the last session in Paris in 1905 which will hold its next meeting in Washington in 1908 under the auspices of the National Association for the Study and Prevention of Tuberculosis

Health of Colon—According to Dr Mohr in *Public Health Reports*, the health conditions of Colon and vicinity show a decided improvement during the past three weeks The number of cases of malarial fever presented for treatment is considerably less, and fewer cases of pneumonia are being found This improvement may be attributed to the prevailing good weather and the fresh winds, which have had the effect of drying up pools and collections of water thus notably diminishing the number of mosquitoes The work of permanently improving Colon is being rapidly pushed fo [illegible] The [illegible]ipal streets are being paved with vitrified b[illegible] be ing macadamized Before the advent [illegible] on all the houses in Colon will be connected with the water and sewerage systems The reclaiming of large tracts of ground by drainage on the island now permits of extensive building which will relieve the overcrowding of houses, a feature which has greatly retarded the sanitary work in Colon

FOREIGN

Osler Gives Harveian Oration.—The Harveian Oration before the Royal College of Physicians, London, was delivered by Dr William Osler Oct 18, 1906 on "The Growth of Truth, as Illustrated in the Discovery of the Circulation of the Blood"

Prevalent Diseases in Japan.—Passed Assistant Surgeon Cumming reports a widespread epidemic of what appears to be cerebrospinal meningitis in Tokio, and that plague seems to be rather serious in Wakayama ken, a prefecture not far from Kobe

Advertising Write ups Presented as Papers at Society Meetings—An editorial in the *Deutsche med Wochschr*, October 11, comments caustically on the lack of oversight of communications accepted by scientific congresses The text on which the editorial is based is an article on "The Chemistry and Technology of Malt Coffee," read at the last Naturforscher Congress A hectographed summary of the article has just been received by the editor, arriving in an envelope stamped "Stuttgart" and with the printed heading, "Seventy eighth Congress of German Physicians and Naturalists," thus suggesting that it was an official communication from the congress Accompanying the abstract was a hectographed letter from the author, privat docent Junghahn, of the Charlottenburg College of Technology, commending the article to the good graces of the editor and expressing the hope that he would publish the abstract The editor comments that this "scientific communication" is being utilized in a not very nice way for advertising purposes, and evidently with the concurrence of privat docent Junghahn He exclaims further "How many really good communications in the section may have had their time unnecessarily shortened to make way for this Junghahn article! The officers of a congress have the power, and it is their duty to see that these conditions are improved"

LONDON LETTER.

(*From Our Regular Correspondent*)

LONDON, Oct 6, 1906

A Physician a Victim to the X Rays

One of the principal *x* ray specialists in the country, Mr Hall Edwards of Birmingham, president of the British Electro therapeutic Society, has fallen a victim to his work He was always greatly interested in photography, for which he gained medals all over the world When the *x* rays were introduced he was one of the pioneer workers and devoted himself to their study with enthusiasm He worked at them unconscious of peril and neglected his general practice as a physician until he became one of the foremost experts in the country In 1900 he went out as a radiographer in the Boer War, and afterward published the result of his experience on the battle field On his return he began to feel the ill effects of his work Warts appeared on his fingers He has excruciating pain, as if a red hot needle were run into the hand and up the arm He still continues his work but he uses gloves In a letter to the *British Medical Journal* he asks for some suggestions as to treatment Despite all methods of protection his hands are steadily growing worse He has not experienced a moment's freedom from pain for more than two years, and at times the pain is so severe that he is rendered absolutely incapable of work, mental or otherwise In cold weather he is unable to dress himself and the pain experienced can not be expressed in words On the back of each hand are from 50 to 60 warts many of them confluent Drugs have so far failed to give him the slightest relief Ointments he finds as a rule to be injurious The warts are so sensitive and painful that it is impossible to remove them with sandpaper He therefore uses a treble strength lotion of lead and opium in the form of a poultice This softens the warts so that they can be removed by scraping with a knife For two or three days after this application the pain is increased, but the fingers are rendered more pliable and mobile The increased pain experienced after this treatment is due to the fact that in removing the warts small sores are left The excruciating ever present pain appears to be due to permanent irritation of the cutaneous nerves which nothing relieves and which is intensified by holding the hands in a dependent position and by cold The pain is of a neuralgic character and is intensified from time to time by sudden stabs and jumps of such severity as to make him cry out He has so far received so little relief from any method of treatment that he has given up all hope Specialists all over the world—in France, Germany and America—have given him advice without effect One suggestion was to use a preparation of pitch, it being thought that the darkness induced would have a healing influence Cocain painted on, however strong, gives no relief He does not take morphin because he can not endure the smallest dose Hard lumps may be removed with emery paper, but they recur and develop into ulcers which take years to heal He attributes his condition to the absence of precautions to protect himself, and warns other workers to be more careful.

Correspondence

Insurance Examination Fees.

————, Oct 10, 1906

To the Editor—One would infer from recent protests on the subject of fees for life insurance examinations that the *casus belli* is of recent origin, and yet with a few notable exceptions the companies that now pay less than a minimum fee of $5 have had a graded fee bill for many years The only companies which I now recall that have recently adopted a graded fee bill are the Equitable, Mutual Life, Home Life, Germania, Security Mutual and Phoenix Mutual

In my opinion, a graded fee bill is wholly wrong, unequitable and untenable, both in principle and practice, and if you will allow me space I will endeavor to show the logic of my position.

We are told that the medical fee should be in reasonable proportion to the premium received, and again that the policy holder can afford to pay but a small medical fee when the application is for a small amount, while on larger policies a larger fee can be allowed

Such a position is untenable, because it implies that the medical fee bears a fixed relation to the face of the policy, whereas the muchly quoted "Section 97" of the new legislation specifically states that certain (4) expense items (among them medical examinations) incurred in securing new business shall not exceed in the aggregate the total loadings and mortality gains

The law does not require or assume, as a graded fee bill would imply, that a company's policy shall be kept in classes according to their respective sizes, together with an expense account for each class On the contrary, the law clearly contemplates that the tabulated amount of all premiums received on new business in any given calendar year shall be used as a basis for reckoning the aggregate amount of available for the (4) expense items named in "Section 97"

The loading and mortality gains as provided for in the new legislation are substantially the same on each $1,000 of insurance, and are just fifty times as much on an insurance of $50,000 as on an insurance of $1,000 Moreover, it matters not whether the insurance of $50,000 is on one life or on fifty lives, or on any number of lives between one and fifty

Now, then, if it be true that the medical fee should be in reasonable proportion to the premium received, and if the policy holder can afford to pay but a small fee on small applications and a larger fee on larger applications, we can not escape the logical conclusion that the medical fee should be ten times as much on a policy for $30,000, for example, as on a policy for only $3,000 While the premises wholly justify the foregoing conclusion and no other, such a system would be manifestly unequitable to every interest involved.

Every premium is made up of three elements, viz, mortality fund, reserve fund and the expense fund, which is called loading The first two are fixed by law and are the same for all companies operating on the same per cent basis Each company fixes its own loading, but it is approximately the same with all companies The mortality gains are regulated by statistics and are substantially the same with all companies On the standard forms of policies provided for in the new legislation the "total loadings and mortality gains" equal from 65 to 75 per cent of one annual premium

From the foregoing facts we find that, in securing new business, any company may legally pay to its soliciting agents, its inspectors of proposed risks and its medical examiners a sum of money equal in the aggregate to about 75 per cent of the tabulated amount of all its first year premiums Moreover, while the companies may arbitrarily pay less than the amount named for the items mentioned, they can not pay more, and in fixing the amounts apportioned to agents, inspectors and examiners, respectively, they are bound by no law It is unquestionably true, as shown above, that the medical fee bears no relation whatever either to the premium or to the face of the policy, but that the total amount paid to examiners is charged to a general expense fund.

The service required is, and very properly should be, equally thorough and uniform in all cases irrespective of the amount of the application An examination made by any physician worthy of the trust and confidence placed in him by the company he represents will be just as complete and dependable in $1,000 cases as in cases of any other larger amounts

I maintain that every feature of the entire subject warrants a uniform fee for a uniform service, the one commensurate with the other If a uniform fee of $5 would amount in the aggregate to a sum out of proportion to the aggregate amount of premiums received, then it should be placed at a lower figure, provided always that it should be uniform just so long as the service is uniform

In cases where large amounts are applied for, the interest of the company would be better subserved by having the opinion of two examiners, paying each the original uniform fee, instead of paying one physician $7 50 or $10 for the same service and the identical opinion which, in smaller cases, would be rendered for a smaller fee

In other instances where additional urinalyses are required, or a microscopic analysis of the urine or sputum is desired, reasonable extra compensation should be allowed

In the foregoing remarks it has not been my intention to say or imply that the aggregate amount paid by companies having a graded fee bill is less than it should be, but it has been my purpose to criticise any sort of a graded medical fee bill as being a wholly unequitable method of distributing this compensation

Having clearly shown, it seems to me, that all the essential conditions connected with the subject warrant a uniform fee for a uniform service, let us see if a uniform medical fee of $5 is excessive We have shown that the new legislation will allow the companies in securing new business to pay to their agents, inspectors and examiners a sum of money equal in the aggregate to about 75 per cent of the aggregate amount of the first annual premiums

Policies vary in amount from $1,000 to $1 000 000 but the amount of the average policy is not less than $2 000 being at the end of the year 1905 for the Equitable $2 605, for the Mutual Benefit, $2 301, for the Mutual Life, $2 306, for the Massachusetts Mutual, $2,241, for the Manhattan, $2 144, for the Penn Mutual, $2 354, and for the Provident Savings, $2,230, but for illustration we will place the amount of the average policy at only $2,000 The average premium for each $1 000 of insurance on the standard forms of policies provided for in the new legislation is not less than $30 Now, then, we have found that the average premium on the average policy is not less than $60 We have shown that the "loading and mortality gains" equal about 75 per cent of the premium, which on the average policy is $45 On each (average) policy written the company will have not less than $45 to be paid to the agent the inspector and the examiner

Now deduct $1 for the inspector $5 for the examiner and $1 to help create a fund to pay the inspector and examiner in cases of rejected applications The net result will be $38 for the agent's commission, which is equal to more than 60 per cent of the premium Moreover, the new law allows from three to nine agency renewals aggregating 65 per cent of one annual premium

The above figures may not be technically accurate in every particular but they are substantially correct They clearly demonstrate that a uniform fee for a uniform service may be reasonably and justly placed at $5

Before closing, let me call attention to one illustration The Equitable and the Mutual Benefit operate on the same per cent basis, hence the mortality and reserve funds are the same (made so by law) for each company Each company arbitrarily fixes its own loading

On a twenty payment life policy at age of 35, the Equitable charges a premium of $38 34, while the Mutual Benefit charges only $36.22 On each $1,000 of insurance, then, the Equitable collects from the policy holder $2 12 for expenses more than does the Mutual Benefit on the same policy at the same age But the Mutual Benefit pays a uniform medical fee of $5, while the Equitable allows a fee of only $3 on applications of $3,000 and less Consequently, on each $1,000 policy as illustrated, the Equitable has of the premium, after paying the medical fee, $4 12 more than does the Mutual Benefit While this difference alone is equal to 11 per cent of the premium, the Mutual Benefit has an enviable reputation for paying large annual dividends to its policy holders

A Square Deal, M D

Medical Fees in Country Practice.

Phillipsburg, Kan, Oct 15, 1906

To the Editor —I was very much interested in the article under the above caption which appeared in The Journal, Oct 6, 1906, by Dr W O Bridges

Having been a country practitioner for almost 14 years, I can verify his statements regarding the small fees of country physicians The charges in western Kansas do not differ materially from those in Nebraska or Iowa Why the fees are so inadequate can be explained by cut prices and superficial medical training

The question that interests most of us, however, is how to raise our fees sufficiently to inspire respect and confidence on the part of the laity Dr Bridges suggests that this can be attained by organization and a fee schedule. I do not believe that it can be accomplished in that way In the first place all physicians do not have so keen a moral sense as they ought to have, and many will violate the fee agreement and make low fees It is fact and not a theory that confronts us In the second place, the same fee ought not to be charged by two physicians, one of whom has a very meager education, poor equipment and a "stand pat" policy, while the other has up to date text books, modern equipment, and makes a careful, conscientious study of every case entrusted to him If these two physicians were called to treat a serious case in the country, would it be fair or just to hold them down to a charge of 50 cents a mile, because perchance the schedule said to do so? Is their skill the same? Would their advice be worth the same?

The fees charged should be based on merit Every case should stand alone, and the charge should be made according to the seriousness of the condition, the responsibility assumed, the time consumed in its treatment, and the skill displayed Why should a physician charge less for his advice, when human life is in the scale, than a lawyer for his, where the latter's advice involves a question of property worth from $300 to $500?

To illustrate A farmer has trouble with a neighbor over the ownership of a calf or shoat One or both consult a lawyer, he listens, collects a retainer fee of $10 or $15, and tells him he will take the case under advisement The same farmer is taken ill, a physician is called and responds, plods through six or seven miles of mud, and the farmer makes a roar because the physician makes a charge of $5 Why? Because the schedule says 50 cents a mile one way

The lawyer has the farmer educated on the fee question, the physician has not The condition will never become better until our patrons are taught that the charge is not for prescription, medicine or livery but for knowledge and skill Let us charge fair fees and, having charged, let us deliver the goods

D D Haggard, M D

Report of Relief Committee of Physicians of San Francisco

San Francisco, Oct 25 1906

To the Editor —I regret to notice that in its report, published in The Journal, Oct 20 1906 page 1311 the relief committee of physicians of San Francisco has omitted numer ous contributions of books and surgical instruments made by physicians in various parts of the United States I would mention also that the firm of Saunders & Co, of Philadelphia, donated books to the value of about $1,200 The instrument dealers and book dealers of San Francisco made liberal dis counts, practically to the value of their own commissions, for the benefit of physicians accredited by the physicians' com mittee The above gifts were appreciated by the physicians quite as much as contributions in money

Emmet Rixford,
Treasurer, Physicians' Relief Fund

Pharmacology

URON AND THIALION

Report of the Council on Pharmacy and Chemistry, A. M A.

The following reports were submitted to the Council by subcommittees which examined Uron (Uron Chemical Company) and Thialion (Vass Chemical Company)

To the Council on Pharmacy and Chemistry

The following report on Uron is herewith submitted

Uron is sold by the "Uron Chemical Co, Box A, St Louis, Mo" In the literature distributed to physicians and in advertisements appearing in current medical journals $LiC_{12}H_7N_4O_2$ is given as the chemical formula of Uron

According to analyses, this article is not a chemical compound, but is a mixture of lithium benzoate and hexamethylenamin[1] in approximately the following proportions

Lithium benzoate	58 per cent
Hexamethylenamin	42 per cent

It is recommended that Uron be refused recognition and that this report be published

To the Council on Pharmacy and Chemistry

We beg leave to report on Thialion as follows

Thialion is sold by the Vass Chemical Co, Danbury, Conn In the literature supplied to physicians and in the advertisements in medical journals Thialion is stated to be "a laxative salt of lithia" with the chemical formula "3Li O NaO SO_3 7HO" "Sodio-trilithic anhydrosulphate" is given as a synonym An elaborate graphic or structural formula is also given

According to analyses, this preparation is a mixture consisting chiefly of sodium sulphate and sodium citrate with very small amounts of lithium the average of several estimations indicating the following composition

Sodium citrate	58 6
Sodium sulphate, anhydrous	26 6
Sodium chlorid	3 3
Lithium citrate anhydrous	1 8
Water	9 7

Thus, the advertising literature is a deliberate misrepresentation of the facts It is, therefore, recommended that the preparation be refused recognition, and that this report be published

The recommendations of the subcommittees were adopted by the Council and in accordance therewith the above reports are published W A Puckner, Secretary

In publishing the above report, the Council is presenting to the medical profession another object lesson and one that illustrates how easily our profession is being humbugged. There are several things that we may learn from the report on these two nostrums, but at this time we will take up only one phase of the lesson Many of the scientific chemical compounds and derivatives given us by the German chemists have been distinct advancements and have proved to be valuable additions to our therapeutic agents further, they were received with so much favor by physicians that they have been profitable for those who made them It is not strange, therefore, that imitators should appear One of the first was our old friend, Antikamnia (which was introduced as a "new synthetical" compound) This was followed by Ammonol, Phenalgin, Salacetin, and a host of others having acetanilid as their principal ingredient

But there are hundreds of other so called "new chemical" compounds among the "ethical" proprietaries on the market aside from the acetanilid mixtures These wonderful compounds, by the mysterious union of their ingredients, possess therapeutic properties different from, or more powerful for good than, the drugs from which they are made. At least, this is what we are told, and this is what many believe or they would not sell so well

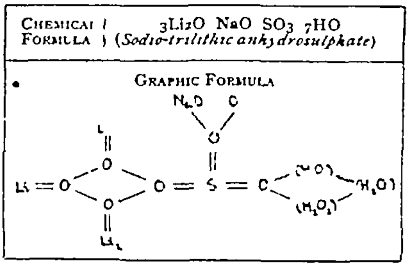
There is another factor worth noting connected with this subject When to the claim that the mixture is a "chemical compound" is added a complex chemical formula, it prevents the impertient question "What is it?" For isn't the "formula" there, and is not the information given without the asking? Most of us have been so overcome by the display of the chemical knowledge of the nostrum maker that we have been afraid to expose our ignorance by asking for information or explanation And thus the promoter avoids perplexing questions, which, if answered truthfully, would spell bankruptcy

URON

The Uron Chemical Company informs us, concerning Uron, that it has the chemical formula of $Li\,C_{12}H_7N_4O_2$. Now this formula looks very dignified and scientific to those who are not up in chemistry To the chemist, however, the formula signifies nothing A few simple tests reveal the composition of the mixture, and it is surmised that the "formula" is the result of an attempt to combine the formulas of the two ingredients i e, $LiC_7H_5O_2$ and $C_6H_{12}N_4$, the addition being faulty

THIALION

In regard to Thialion, the formula furnished by the Vass Chemical Company is even worse To a physician who possesses but little knowledge of chemistry it will seem impressive, and he may absorb the idea that it stands for a preparation that is the result of exhaustive scientific research To the chemist, this formula will appear as a jumble of symbols and numbers that mean nothing



This picturesque graphic formula for Thialion appears with many of the advertisements To most of us it looks formidable wonderfully and deeply scientific and non understandable to a chemist it looks absurd

It is not worth while to call attention to the simplicity of this simple mixture of ordinary salts, for it is too self evident. As to the remarkable therapeutic qualities of Thialion, the reader is referred to that ably edited "scientific" periodical, the *Uric Acid Monthly* and to the mass of "literature" relating to this wonderful remedy

While there is a ridiculous side to this business, there is also a serious one Those who have been making money out of us undoubtedly laugh in their sleeves at our gullibility, but to us as members of a presumably learned and intelligent profession, it is not a laughing matter The whole nostrum business is a shame and a disgrace

Ministers and "Patent Medicines"

Ministers of the gospel are much to blame for the use of "patent medicines," for they have been as liberal as any class of people in giving testimonials Once in a while, however, the minister sees the matter in a true light, and is not afraid to preach on the subject

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[1] We once more remind our readers that hexamethylenamine is the absurdly long but official name for the article that is sold under the proprietary names Urotropin Formin Cystogen Aminoform Hexamin Uritone etc

Rev J W Perry, a Methodist minister of Knoxville, Tenn., is one of these He recently preached a sermon, which in part is published in the Knoxville (Tenn) *Journal and Tribune,* September 11, and from this we quote

"It has been shown that many leading and popular brands often advertised as non alcoholic were many of them stronger than 'good Scotch rye,' some of them having only some coloring, some deodorizing or other substance to change appearance, smell or taste Others contain opiates and other poisons which cultivate the drug habit and which doubtless are responsible for multitudes of the so called 'dope fiends'

'The methods of some of these people who make 'patent medicines,' in securing testimonials, amounts in many instances to pure fraud. I saw a letter to one of our leading physicians illustrating their methods A gentleman was made to declare himself to be past 100 years of age and in good health, due to the taking of a certain brand of patent stuff Inquiry revealed the man in question was an ignorant negro, possibly 55 or 60 years of age, who had been given a bottle and supposed to have signed a receipt for it

"The 'patent medicine' habit is one that grows because of the whisky and 'dope' in the popular varieties Many ministers have been deceived The makers tell you the dose and when written to usually say 'increase the dose' I have heard physicians of honor, Christian men, who would not cast a reflection on the clergy, declare that they had found ministers in whom they had all confidence, suffering from acute alcoholism due to the use of 'patent medicine' I have known a minister to fall and become a drunkard, as he declared, through the use of 'patent medicine.' He stayed drunk on the stuff whole days at a time

'Let the states follow up the pure-food legislation so that we may know what we get If you need whisky as a medicine, get it and take it as you would strychnin, arsenic, belladonna, opium or morphin But let some physician tell you you need it"

The Debasing Influence of Proprietary Medicines

We quote the following from the presidential address of Dr D C Gore, of Marshall, Mo, before the Missouri State Medical Association, as published in the *Journal of the Missouri State Medical Association,* July The whole address is worth quoting, but we have space for the following only

"That man who waits for the representative of some proprietary medicine to come in and tell him what to give his patients possibly may escape being classified as a charlatan, but he certainly has very little respect for his own professional attainments and voluntarily surrenders his learning, his privileges and his duties to some one else who knows absolutely nothing of his case With the subletly of an Iago, the proprietary medicine man steals the wealth, position and reputation of an unsuspecting profession and supplants professionalism with a damning commercialism, all because physicians allow it and are controlled by a habit which they 'disdain to control', he comes with a pleasing smile and presents you with a bottle of Gastritico, Hepatica or Duodenatica with his positive opinion that it will cure your patient, and you are assured it will because it bears the name of the organ affected, and, of course, it works, it just can't help it, and there you are, your individuality gone, your attainments sacrificed, your professional acumen handed over to organized greed

"'Eternal vigilance' is not only 'the price of liberty' in affairs of state, but in the medical profession as well It is high time that we should shake off the lethargy which this practice begets, and assert our privilege to practice our noble profession in our own way and give to our patients the benefit of our own knowledge and not turn them over to the greedy maw of a soulless corporation which makes stuff to sell.

"It is my honest belief that proprietary medicine is doing more to undermine professionalism to-day than all other influences combined, it lulls the doctor to sleep with the insidious proposition that will do his thinking for him, and eases his conscience with the unction that he has done the best possible thing for his patients because he has medicated them with a nostrum which is backed up by a corporation with lots of money behind it, and it would not, of course, spend its money on the remedy unless it was a good thing—for the corporation Either this nefarious business must be stopped or professionalism is dead, and the erection of high standards of culture of medical men worse than a useless waste of time and money The remedy lies at our own door and only requires a negative action on our part to effect a perfect cure Stop prescribing them, your patients will stop taking them and their manufacture will suddenly cease Their proprietors rely on us as their active agents for the sale of their products, and if we cease our participation in the spread of the business the only possible middle man between the manufacturer and the people has been removed and there is no longer possibility of contact"

Book Notices

In the Year 1800 By S W Kelley M D Being the Relation of Sundry Events Occurring in the Life of Dr Jonathan Brush During that Year Vol III of The Doctor's Recreation Series Cloth Pp 421 Price, $2 50 Akron, Ohio The Saalfield Publishing Company

The Doctor's Recreation Series, as the name indicates, is a series of books for doctors, and is to consist of facts and fiction, as well as of medical history This book, by Dr S W Kelley, is one of the fiction volumes and, in a sense, is a historical novel The history is a brief one as far as the time covered is concerned, only one year, 1800, being included in all that appeared in the over 400 large pages of the book The scenes are laid in a small country town in Maine and in Philadelphia In the former the writer (the story being in the form of an autobiography) is a country doctor, and one of his patients—a beautiful woman, of course—is murdered Around this patient and her murder is woven the plot of the story The doctor goes to Philadelphia later to get his degree and to practice Several well known medical men of a century ago, such as Drs Shippen and Rush, are brought in. There is just enough history, just enough medicine and just enough plot to make the story instructive, interesting and readable, especially to physicians

Diet and Dietetics By A Gautier Edited and Translated by A J Rice-Oxley M A. M D Cloth. Pp 552 Price $3 50 Philadelphia J R. Lippincott Company 1906

This translation appears to have been made from the second edition of the original (Paris, 1904) The book consists of three parts Principles and Methods, Aliments, Regimens Many questions of importance to health and to medical and sociologic problems are discussed in an interesting and instructive manner, and physicians may look with confidence to this book for much valuable information in regard to diet and dietetics, the general interest in which appears to be increasing Atwater's researches in regard to the requirements in energy by man at rest and at work are drawn on freely, but Chittenden's recent studies on the physiology of nutrition do not appear to have been utilized, presumably because they were not available for this edition The translation reads smoothly

Health Care of the Baby A Hand book for Mothers and Nurses By L. Fischer M.D Author of Infant Feeding in Health and Disease A Text book on Diseases of Infancy and Childhood etc. Cloth Pp 144 Price, 75c net. New York Funk & Wagnalls Company 1906

This book is intended as the title states, for the use of mothers and nurses, but it contains many points of interest to the physician The details of ventilation of the baby's room, its clothing, bathing and feeding are considered In regard to artificial feeding Fischer states that each child is a law unto itself, a fact that many physicians are inclined to overlook The chapters on the care of infants and young children in disease, accidents and poisonings, and on correction of bad habits are commendable

The Extra Pharmacopeia of Martindale and Westcott Revised by W H Martindale Ph D F C S and W W Westcott M B., D P H. Twelfth Edition Flexible Leather Pp 1047 Price $4.20 London H K. Lewis, 1906

This book seems to contain a great deal of valuable information and might well be called a pocket dispensatory Unfortunately however it relates chiefly to British preparations

[illegible] Field Libr[illegible]
79591 [illegible] Medical [illegible]

and, therefore, is of more interest to British than to American physicians The chapter on organotherapy takes up preparations of the duodenal mucous membrane, and of the suprarenal and thyroid glands, and the method of treatment by the inspissated milk and blood of thyroidectomized animals

Notes on Surgery for Nurses By J Bell, M.D, F R C S Edin, Consulting Surgeon to the Royal Infirmary, and to the Royal Edinburgh Hospital for Sick Children Sixth Edition, thoroughly revised. Cloth Pp 187 Price $1 50 net New York William Wood & Co

This book has been revised to date and an appendix added concerning "The Relations of the Nurse to the Profession and to the Public" The book relates to conditions in Great Britain which are slightly different from those on this side of the Atlantic The remarks concerning the nurse's deportment in hospitals and in private practice, however, might be read with advantage by nurses everywhere

Marriages

Herbert W Knapp, M.D, to Miss Mae Powers, both of St Louis, Mo, October 16

Henry Flannery, M.D, to Miss Mary Donahue, both of Philadelphia, October 17

Frederick T Fahlen, M.D, to Miss Olive M Cuthbert, both of St Louis, October 10

Lois Worthington, M.D, and Frank Davis, both of Bakersfield, Cal, October 15

Rufus T Dorsey, Jr, M.D, to Miss Laura Witham, both of Atlanta, Ga, October 16

James Irvin, M D, to Miss Kathryn Rose Patton, both of Danville, Va, October 17

Charles Wert, M.D, Wallace, Ind, to Miss Ethel McCann of Indianapolis, October 24

Frank E Brown, M D, to Miss Bessie Humphreys Sherk, both of Baltimore, October 18

Ira C Harris, M D, Braddock, Pa, to Miss Emma Snowden of Duquesne, Pa., October 23

George A Seybold, M.D, Jackson, Mich, to Miss Gertrude M Vint of Detroit, October 25

Norman L. McDiarmid, M D, to Miss Mary Alice Root, both of Dayton, Ohio, October 17

Hartwell A. Sibley, Jr., M.D, to Miss Margaret A. White, both of Stoughton, Mass, recently

Robert Roy Hopkins, M.D, Mathews, Va, to Miss Bessie Dale Miller, at Baltimore, October 17

William C Mebane, M D, Mount Airy, N C, to Miss Susan Mott of Charlotte, October 11

J Cajetan Flynn, M.D, Philadelphia, to Miss Florence Mahoney of New York City, October 11

C Allan Porter, M.D, Rockland, Mass, to Miss Isabelle M Thomas of Middleboro, Mass, October 24

Richard F Shahan, M.D, Eddyville, Iowa, to Miss Gertie B McCombs of Agency, Iowa, October 17

Fletcher W Galloway, M D Cottonwood, Ala, to Miss Annie Thrasher of Dothan, Ala, October 17

Harry L Pollack, M D, Chicago, to Miss Mabel Hirsch of Burlington, Iowa, at Chicago, October 14

Leopold Bauer, M.D, Syracuse, N Y, to Miss Marie Rebecca Jurgens of Brooklyn, N Y, October 9

Robert James Curdy, M.D, Kansas City, Mo, to Miss Annie Richardson Hall of Lawrence, Kan, November 3

Albert Keidel, M.D, Baltimore, to Miss Janet Gordon Van Smith of New York City, at Baltimore, October 15

Arthur H Buck, M.D, Delaware, Ohio, to Miss Jennie Lind Hartje of McComb, Ohio, in Findlay, Ohio, October 16

Theodore Maddox, M D, Union, S C, to Miss Mary Murphy of Pinckney Township, Union County, S C, October 10

Theodore B Bliss, M D, Schenectady, N Y, to Miss Helen Cory of Swampscott, Mass, in Cleveland, Ohio, October 17

William H Moore M.D Viola, Tenn, to Mrs Lyda W Hearn of Woodbury, Tenn., in Nashville, Tenn, October 17

William A Fisher, Jr., M.D, Baltimore, to Miss Annie Courtney Baylor, at Staunton Hill, Charlotte County, Va, October 17

Deaths

John Harrison Blanks, M D Medical College of Alabama, Mobile, 1874, College of Physicians and Surgeons in the City of New York, 1876, of Meridian, Miss, one of the most eminent physicians of Mississippi, president of the Meridian board of health in 1899, and a year later president of the Nashville (Tenn) Medical College, a member of the faculty of the Mississippi Medical College, Meridian, and of the Lauderdale County Medical Association, died in the Touro Infirmary, New Orleans, October 19, after an operation, aged 52

Alphonso Bickford Brown, M D Harvard University Medical School, Boston, 1898, of Newburyport, Mass, a member of the Peary relief expedition to the Arctic, a member of the Massachusetts Medical Association and of the attending staff of the Anna Jaques Hospital, died suddenly from heart disease at the Anna Jaques Hospital, Newburyport, October 17, two weeks after an operation for appendicitis, from which he was apparently recovering, aged 34

Malvern N Due, M.D College of Physicians and Surgeons in the City of New York, 1888, a member of the American Medical Association, Medical Association of the State of Alabama and Jefferson County Medical Society, a member of the United States pension board, for some time city physician, and one of the most prominent physicians of Birmingham, Ala., died in Mobile, October 20, after a long illness, aged 39

James E Stewart, M.D Hospital College of Medicine, Louisville, 1883, one of the founders of Stewart Hospital, Hutchinson Kan, a member of the Reno County Medical Society, died at his home in Hutchinson, October 14, from pneumonia, after an illness of six days, aged 48 At a meeting of the medical profession of Hutchinson a committee was appointed to draft resolutions in memory of Dr Stewart

William Walton Fuqua, M.D Medical College of Virginia, Richmond, 1859, surgeon in the Confederate service during the Civil War, and at one time on duty at Libby prison, Richmond, formerly a practitioner of Hopkinsville, Ky, from 1884 to 1887 professor of anatomy in the Hospital Medical College, Memphis, Tenn, died at his home in Jonesboro, Tenn, October 18, aged 68

Charles P Russell, M.D Bellevue Hospital Medical College, New York City, 1874, a member of the Oneida County Medical Society, consulting dermatologist to Faxton and St Elizabeth's hospitals, Utica, and visiting dermatologist to the Utica General Hospital, died at his home in Utica, from pneumonia, October 26, aged 58

Charles Samuel Williamson, M.D College of Physicians and Surgeons in the City of New York, 1891, of Brooklyn, a member of the American Medical Association and of the Kings County Medical Society, died at Rainbow Lake, in the Adirondacks, October 21, after a short illness, aged 37

Herbert S Jones, M.D New York Homeopathic Medical College and Hospital, 1888, physician to the Bergen County Almshouse, died at his home in Oradell, N J, October 18, as the result of injuries received in a fall several weeks before, in which he sustained a fracture of the skull, aged 54

Arnon Lyon Comstock, M D New York University, New York City, 1904, a member of the Medical Society of the State of New York, and of the Herkimer County Medical Society, died at his home in Ilion, N Y, October 17, from tuberculosis after an illness of more than a year, aged 26

Algernon Sydney Epes, M D Jefferson Medical College, Philadelphia 1858, surgeon in the Confederate service during the Civil War, poor physician of Nottoway County, Va, died at his home in Nottoway Court House, October 19, after an illness of several weeks, aged 70

Reuben T Laycock, M.D Eclectic Medical Institute, Cincinnati, 1874, for 10 years professor of diseases of women and children at the Indianapolis Eclectic Medical College, died at his home in that city, October 22, from valvular heart disease, after a long illness, aged 56

Alva L Hudders, M D Jefferson Medical College Philadelphia, 1886 of Philadelphia, was killed October 28, in an accident on the electric line between Philadelphia and Atlantic City, when a train was thrown from the drawbridge into the waterway at Atlantic City

Paul F Felsberg, M.D Hahnemann Medical College, Philadelphia, 1901 of Philadelphia, was killed October 28, in an accident on the electric line between Philadelphia and Atlantic City, when a train was thrown from the drawbridge into the waterway at Atlantic City

Russell G Andrew, Jr, M.D Medico Chirurgical College of Philadelphia, 1898, coroner of Monmouth County, New Jersey, for three years, died at his home in Highlands, October 19, from pneumonia, after an illness of two weeks, aged 30

J S Grubbs, M D University of Louisville, Medical Department, 1866, a surgeon in the Confederate service during the Civil War, and one of the oldest practitioners of Hopkinsville, Ky, died at his home, October 20, aged 74.

Robert Coulter Banks, M.D Rush Medical College, a veteran of the Civil War, for many years a practitioner of Owatonna, Minn, died at his old home in Pine Island, Minn, September 1, after an illness of three days, aged 69

Harrison H. Power, M.D Geneva (N Y) Medical College, 1850, one of the oldest practitioners of Ionia County, Michigan, a veteran of the Civil War, died at his home in Saranac, Mich, October 20, aged 79

William Alfred Cassidy, M.D University of Vermont, Medical Department, Burlington, 1905, of Russell, Mass, died at the home of his father in Rutland, Vt, October 10, from tuberculosis, aged 28

Gustave Vetter, M.D St Louis College of Physicians and Surgeons, 1884, health officer and member of the board of education of Belleville, Ill, died suddenly in that city, October 25, aged 53

W Updyke Selover, M.D New York University, New York City, 1874, mayor of Rahway, N J, for two years, and water commissioner, died at his home in Newark, N J., October 16, aged 63

Joseph C Mull, M.D Atlanta (Ga) Medical College, 1893, vice president of Floyd County Medical Society, died at his home in Rome, Ga, from typhoid fever, October 24, aged 39

John W Stockton, M.D Eclectic College of Medicine, Cincinnati, 1877, of Washington, Pa, died in the Washington Hospital, October 10, after an illness of two years, aged 58

Walter L Hall, M.D Bellevue Hospital Medical College, New York City, 1868, of Medford, Mass, died recently at a hospital in Medford, after an operation for appendicitis, aged 60

Virgil Weir, M.D University of Michigan Homeopathic Medical College, Ann Arbor, 1904, of Toledo, died at his home in Warren, Ohio, October 18, from tuberculosis, aged 27

P Alvin Dix, M.D Fort Wayne (Ind) College of Medicine, 1880, for many years a practitioner of Paulding, Ohio, died at the Ohio State Hospital, Toledo, October 13, aged 56

David M. Claitor, M.D Memphis Hospital Medical College, Memphis, Tenn., 1900, of Kosciusko, Miss, was shot and killed by Dr John H. Love, August 27, at Kosciusko

Edward R. McMullin, M.D Vanderbilt University, Medical Department, Nashville, 1885, died at his home in Maben, Miss, September 12, after a long and painful illness

Bernhardt Fincke, M.D New York University, New York City, 1854, died at his home in Brooklyn, October 21, after an illness of a year, from senile debility, aged 85

Dudley S Laws, M.D University of Nashville, Medical Department, 1873, died suddenly from heart disease at his home in Clarksburg, Tenn, October 19, aged 79

William H Carothers, M D Medical College of Ohio, Cincinnati, 1878, died suddenly at his home in Melrose, Mass, recently, from hemorrhage, aged 52

Edmund Moore, M.D Dalhousie University Medical Faculty, Halifax, N S, 1874, died recently at Salisbury, N B, where he had practiced for 32 years

Frank W Schuessler, M.D University of Maryland School of Medicine, Baltimore, 1890, died at his home in Canton, Baltimore, October 16, aged 40

E B LeFevre, M.D Medical College of Ohio, Cincinnati, 1889, of Abilene, Kan, died from hemorrhage of the lungs in Danville, Ill, October 21

Helen McAndrew, M.D Hygeio Therapeutic College of New York, New York City, 1853, died at her home in Ypsilanti, Mich., October 28, aged 85

Timothy S Foster, M D Medical School of Maine at Bowdoin College, Brunswick, 1862, died at his home in Laconia, N H., October 24 aged 78

Daniel Janney, M.D Hahnemann Medical College, Philadelphia, 1850, died at his home in Grimes, Va, October 15, aged 79

Duncan Sinclair, M.D University of Maryland School of Medicine, Baltimore, 1855, of Rowland, N C., died recently, aged 84

Francis M Richardson, M.D Eclectic Medical Institute, Cincinnati, 1876 died at his home in Chicago, October 24, aged 75

Queries and Minor Notes

Anonymous Communications will not be noticed Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

TREATMENT OF SCALP WOUNDS

———, ———, Oct. 18, 1906

To the Editor —What is the treatment in the case of scalp wounds made by indirect violence such as the head striking gravel on the road and in which in addition to one or more lacerated wounds say two inches long, the scalp is separated from the skull but not detached. In the case referred to the periosteum of the skull has sloughed off, owing to the contusion it received There is an area adjacent to the wound and about half the size of the same, where the skull is bare but is covered by the scalp In response to peroxid of hydrogen and copious irrigation of the pockets with antiseptic solutions the wounds can be kept clean, yet no great advance is made toward a rational and satisfactory result. I have been unable to find any information regarding such a condition in any standard text book on surgery A. B Z.

Answer.—Our correspondent does not mention the length of time which has elapsed since the receipt of the injury, which is important in enabling one to form some idea of the present condition of the tissues. The important point in the case is, whether or not the bone has been so injured that necrosis has or will result. Mere separation of the scalp, including the periosteum, from the bone is not sufficient to produce death of the bone, as the soft parts may be replaced and perfect healing will result. Should the bone however, be so seriously injured, or should infection of such a degree take place that death of the bone results, union between the scalp and the dead bone will not occur Either the dead bone must be removed by the surgeon or one must await Nature's slow process of casting off dead bone. In the present case, free drainage should be established and the wound kept as surgically clean as possible. If the bone is not dead, as soon as the sloughing soft parts have cleaned up the scalp will settle down and adhere to the skull again If the bone is dead, it should be removed. Usually in such cases only the outer table is involved. As soon as all the dead bone, should any be present, is removed, the wound will close.

REQUESTS INFORMATION ABOUT DAYTON AUTOMOBILE

Salt Lake City, Oct. 27, 1906

To the Editor —Will any reader who has had any experience with the Reliable-Dayton automobile kindly give me his experience T C Gibson, M.D,
400 Tribune Bldg

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers U S Army week ending Oct. 27 1906

Steer Samuel L. asst surgeon returned to Fort Assinniboine Mont. from leave of absence.

Wales Philip G surgeon, left Fort Wayne Mich, on leave of absence for ten days.

Rhoads Thomas L. asst surgeon left West Point N Y for Fort Crook, Neb his new station

Maus Louis M deputy surgeon general returned from leave of absence to duty as chief surgeon Department of Texas

Duncan William A. asst. surgeon arrived in San Francisco for one month's leave of absence from the Philippines Division

McCulloch Champe C, Jr surgeon left Fort Meade S D, on leave of absence for one month

Wadhams, Sanford H asst surgeon returned to Fort Slocum N Y from detached service at Fort Mackenzie Wyo

Heysinger James D asst surgeon granted an extension of sixteen days to his leave of absence

Deshon George D surgeon ordered to Rochester Minn, for observation and treatment.

Lyster Theodore C. asst surgeon returned to Ancon Hospital Canal Zone from special leave of absence

Ekwurzel George M asst surgeon returned to Fort Keogh Mont. from practice march.

Talbott Edward M asst surgeon returned to Fort Leavenworth Kan from detached service at Kansas City Kan with troops

Richardson George H contract surgeon relieved from duty at the Depot of Recruits and Casuals, Angel Island Cal., and ordered to duty at the Presidio of San Francisco

McPheeters Samuel B., contract surgeon ordered from St. Louis Mo to Fort Robinson Neb for duty

Kress Clarence C. contract surgeon ordered from St. Louis Mo., to Fort Reno Okla for duty

Cullen Charles W contract surgeon ordered from Cincinnati Ohio to Fort Sill Okla for duty

Stearns Charles H contract surgeon relieved from duty at Fort Monroe Va and ordered to Fort Screven Ga., for duty

Branch Frederick D contract surgeon granted leave of absence for two months twenty five days with perm[illegible]n to [illegible]ord sea.

Merrick John N contract surgeon rel[illegible]duty at Fort Missoula, Mont., and ordered to [illegible]ilippine service.

Hull Alva R contract surgeon, ordered from San Francisco to Fort Logan, Colo, with 21st Infantry, and thence to his home, Oconomowoc, Wis for annulment of contract

Newton, Ralph W contract surgeon, ordered from New York City to Fort Niagara, N Y for duty

Burkart John L. contract surgeon, left Fort Sheridan, Ill, on leave of absence for one month

Craig Emmett J dental surgeon arrived at San Francisco on leave of absence for one month from the Philippines Division

Navy Changes

Changes in the Medical Corps, U S Navy, for the week ending Oct 27, 1906

Drake N H medical inspector retired placed on the retired list of officers of the Navy from Oct 6 1906

Donelson M acting asst surgeon, to the U S Naval Medical School Washington for instruction

Casto D H acting asst surgeon, to the U S Naval Medical School Washington for instruction

Decker, C J, surgeon, granted sick leave of absence for three months

Stitt, E R surgeon, to Naval Medical School

Holcomb R C P A. surgeon additional duty as quarantine officer at Culebra W I, for the purpose of inspecting Government vessels at that port

Munger C B, asst. surgeon detached Naval Training Station San Francisco to U S S *Supply* Naval Station, Guam, L I sailing Nov 5 1906

Public Health and Marine Hospital Service

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending Oct. 24, 1906

Gassaway J M, surgeon, granted leave of absence for ten days from Nov 4 1906

Carrington P M surgeon granted leave of absence for seven days under provisions of Paragraph 189 of the Regulations, from October 23 1906

Carrington, P M. surgeon granted extension of leave of absence for fifteen days from Oct. 30 1906

Cumming H S P A surgeon leave of absence granted for one month from September 15, amended so as to grant him one month s leave from Oct. 4, 1906

Anderson J F, P A. surgeon, granted leave of absence for one month from Nov 5, 1906

Long John D P A. surgeon, relieved from duty at Manila, P I and directed to proceed to San Francisco

Alexander, E, acting asst. surgeon granted leave of absence for seven days from Nov 1, 1906

Fisher C. E acting asst. surgeon granted leave of absence for seven days from October 17 1906

Mason W C acting asst. surgeon, granted leave of absence for twelve days from Sept. 17, 1906

Simonson G T acting asst.-surgeon granted five days leave of absence from Oct. 19 1906

Straw, E E acting asst surgeon, granted leave of absence for twenty days from Oct 15 1906

Walker T D acting asst. surgeon, granted leave of absence for ten days from Oct. 18 1906

Gahn Henry, pharmacist granted leave of absence for twelve days from Oct. 22 1906

Holt, E M pharmacist, granted leave of absence for twenty seven days from Oct. 26, 1906

APPOINTMENT

Dr J F Blanchard was appointed a temporary acting asst surgeon for duty at Newport, Vt, in connection with the examination of alien immigrants

Health Reports.

The following cases of smallpox yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine-Hospital Service during the week ended Oct. 26 1906

SMALLPOX—UNITED STATES

Montana Cascade County Sept 1-30 1 case.
Oregon Marion County Sept. 1 30, 1 death
Tennessee Knoxville Oct. 19 20 1 case.
Texas Houston Sept. 29-Oct. 6, 1 case.
Utah General Sept 1-30, 20 cases.

SMALLPOX—FOREIGN

Africa Cape Town Sept. 1-8 2 cases
Argentina Buenos Ayres July 1-31 99 deaths
Canada Winnipeg Oct. 5-12, 3 cases.
France Marseilles Sept. 1 30, 12 deaths, Paris Sept 15-22 2 cases, Sept. 29-Oct. 6 2 cases.
Germany Bremen Sept. 29-Oct 6, 1 case
India Bombay Sept. 18-25, 1 death Madras Sept 15-21 3 deaths.
Italy General, Sept 27 Oct 4 1 case.
Russia Moscow Sept. 15-29, 6 cases, 2 deaths St. Petersburg Sept 8 12, 4 cases 2 deaths.
Siberia Vladivostock, Aug 21 1 case
Turkey Constantinople Sept. 30 Oct 7, 1 death.

YELLOW FEVER.

Cuba Havana Oct. 19-21 4 cases.
Guatemala Gualan Oct 2 4 cases.
Mexico Merida Sept. 30-Oct. 6 4 cases 4 deaths Tustepec, 1 case 1 death

CHOLERA—INSULAR

Philippine Islands Manila, Sept. 8-15 20 cases 17 deaths Provinces 120 cases 94 deaths.

CHOLERA—FOREIGN

India Bombay Sept 18 25 21 deaths Madras Sept 15-21 87 deaths Rangoon Sept 8 15 1 death.

PLAGUE

China Hongkong, Aug 25 Sept 1 1 case, 1 death.
Egypt Alexandria, Sept. 21 25, 2 cases, 1 death, Suez, Sept. 21 27, 6 cases, 2 deaths.
India General Sept. 1-8, 4,304 cases, 3,184 deaths Bombay, Sept. 18 25, 41 deaths Karachi Sept. 3 16 18 cases, 10 deaths, Madras, Sept. 15-21 1 death, Rangoon, Sept. 8-15, 1 case 48 deaths.
Japan Waykayama Ken, Oct. 2 present.
Mauritius Aug 8 24 9 cases, 6 deaths

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Nevada State Board of Medical Examiners, Carson City, November 5 Secretary S L. Lee, Carson City

Nebraska State Board of Health State House, Lincoln, November 7 8 Secretary, Geo H Brash Beatrice

Maine Board of Registration in Medicine, Portland, November 13 Secretary Wm J Maybury, Saco

Connecticut Medical Examining Board City Hall New Haven, November 13 14 Secretary Charles A Tuttle New Haven.

Massachusetts Board of Registration in Medicine, State House, Boston, November 13-14 Secretary, *Edwin B Harvey State House*

West Virginia State Board of Health, The Frederick Huntington, November 13-15 Secretary, H A. Barbee, Point Pleasant.

Missouri State Board of Health Kansas City, November 26-28 Secretary, J A. B Adcock, Warrensburg

Needed Reforms in the Medical Laws of the State of New York.—Under this head Dr Frank Van Fleet, formerly chairman of the committee on legislation of the Medical Society of the State of New York, writes an interesting article in the October *Post Graduate* This continues the effort to secure a single board of medical examiners In regard to the defects of the present New York law, he says

> I am not in favor of so many laws as we, as a state labor under to-day The enactment of law is not ever a thing to be proud of however necessary it may be That we must have laws in the present condition of society is unfortunately too true they are a sort of necessary evil, and being such ought to be as few and as simple as possible. Our present medical law to my mind, is defective in the following particulars First, it is cumbersome, second it discriminates in favor of certain classes, third, it does not accomplish the purpose for which it was enacted and fourth it is unjust in its method of enforcement.
>
> The *first objection requires no argument, for all it is necessary* to do is to read it and its cumbersomeness is apparent I do not consider it is necessary to say more about this defect, nor would I consider it worth my time to criticise it if this was its only defect.
>
> The second objection that the law discriminates in favor of selected classes, is a glaring defect, and almost sufficient it seems to me, to warrant its repeal

In regard to the second objection he shows that while there are three separate examining boards, the applicant does not necessarily appear before the board representing his school of practice, but may take his examination before any of the boards, since the examination is the same in all departments excepting in that relating to therapeutics and the treatment of disease Referring to the fact that after a physician is once licensed no restrictions are placed on him as to what methods he is to employ, Dr Van Fleet says

> This is, of course as it should be. It would be impossible for a physician to act intelligently or to do the best possible for his client in the treatment of disease if he were limited to the employment of any single method Indeed an intelligent and conscientious physician would feel himself so hampered by a restriction of this kind as to be incompetent and unwilling to treat disease. The greatest possible freedom must be permitted in the practice of the healing art if satisfactory results are expected, and even then with all the methods of treatment, and all the remedies known to science at his command, the educated physician realizes his weakness and must at times admit himself baffled.
>
> The present law has not worked to the disadvantage of the practitioners who have qualified under it in fact it has done more than anything else to break down the barrier which formerly existed *between the practitioners of the various schools* which these three boards represent. There is to-day practically no difference in the methods employed by the licensed physicians of this state in the treatment of disease.

But why have separate boards? If a separate board is to be allowed for every new sect in medicine which comes up, where will it end?

> If homeopathy is recognized by the state why not 'osteopathy?' Is the state competent to discriminate between the truths of homeopathy and the fallacies of osteopathy? If not, why does the state accord to one the privilege it denies to another?
>
> To ignore them then the state must flatly refuse to accord to one *class of citizens privileges it accords to others and this I do* not believe the state will do If this applies to homeopathy and osteopathy why not to naturopathy vitapathy hydropathy and so on? The state in granting exclusive privileges to three classes of practitioners discriminates unjustly unless provision is made for the recognition as separate classes of all other sects who are willing to comply with the requirements similar to (not necessarily identical with) those at present recognized

Among other defects in the laws, Dr Van Fleet reveals the failure to define clearly what the practice of medicine really is, and states the purpose of the law as follows

> The purpose was not to create or keep alive any particular system or method of practice, or to subsidize any school of medicine or to foster a monopoly The purpose, pure and simple was to protect the people of the State of New York from incompetent practitioners of the healing art. Lawyers and judges have been found whose minds are not broad enough to grasp this and the former have urged and the latter have ruled that to practice medicine one must give drugs and if one undertook to cure disease by any other method the act did not constitute a violation of the statute
>
> So the law by failing to give an accurate and clear definition of the term, has been used by unscrupulous or misguided people to defeat the very purpose for which it was enacted. The law is unjust in the provision prescribed for its enforcement.

The author then shows that legal machinery of the state is not provided to enforce the law, this being left to the county societies As to improvements in the law the author's suggestions are

> The present formation of the Board of Examiners I would do away with entirely In its place I would substitute a single examining board, which would have nothing about it to indicate that it represented any school or schools of medicine. At a conference with the Department of Education last winter in which I participated one of the members of the department said among other things, as I remember it, that if he or some member of his family was sick he would like to be able to call in some physician on whom the state had put its stamp of proficiency without having to think anything about the school of practice the physician represented What the layman desires when he is sick is to get well, and he wants this result accomplished in the simplest most direct and safest way He is not concerned about the method whether it is regular or irregular, homeopathic or osteopathic. And the honorable physician will not let his patient suffer or die or permit his cure to be delayed, because the best method of treatment is not the method of his school. I have always been glad that I was not the adherent of a school or a 'method of practice but just an ordinary simple doctor and the graduate of an ordinary simple medical college. I believe the time has arrived when there is no place for a doctor who calls himself by a peculiar title, or adopts a peculiar method of treatment and from my conversation with members of the State Legislature and of the State Department of Education, I believe this is the view which is coming to be generally accepted. So I would abolish separate boards of examiners and adopt a single board before which all applicants for the right to practice the healing art should appear and when the person so applying had demonstrated his ability to recognize disease, and was reasonably familiar with the various methods of cure, I would grant him the right to practice. After that if he wanted to call himself a homeopath or an osteopath or some other kind of a 'path that would be his individual concern
>
> How this single board should be appointed is one of the details to be worked out. I would favor the appointment of examiners by the governor of the state, or by the Department of Education on the recommendation of universities having medical departments. I would advocate the passage of a law accurately defining the practice of medicine, or what would be better, defining the practice of the healing art, eliminating entirely the word medicine, so that there could be no doubt in the mind of anybody that a person practicing this art for gain, who had not received from the state a certificate of proficiency, was a dangerous character who should be put under restraint.
>
> Finally, if it is necessary to have a separate organization to look after the enforcement of this law, as I am firmly convinced it is, I would advocate the formation of such a body composed of physicians and laymen authorized by legal enactment to look after the enforcement of this and other laws affecting the public health for there are other laws quite as important and to this organization I would suggest that an annual appropriation should be made to carry on the work.
>
> There was a bill introduced in the legislature of 1906 by the Assembly Committee on Public Health which embodied some of the ideas I have attempted to express It was known as Assembly Bill No 1715 Something of this sort is sure to come to pass in the near future and the medical profession should have a voice in it The writing on the wall is very plain to many of us who have kept in touch with recent events. Changes are evidences of progress in this rapidly moving world of ours and we can not stand still for if we are not moving forward we are moving backward If we would keep in the procession we must conform ourselves to the inevitable. Our present medical law does not meet the demands of the times, and it must be changed The legislature and the Department of Education look to the medical profession to advocate such changes. Shall we recognize the inevitable and take the initiative or shall we allow some other force to enter in and take the initiative while we stand aside?

Nebraska August Report.—Dr George H Brash, secretary of the Nebraska State Board of Health, reports the written examination held at Lincoln, Aug 8 9, 1906 The number of subjects examined in was 8, total number of questions asked, 80, percentage required to pass 75 candidates examined, 14, passed, 9 failed 5 Eight reciprocal licenses were granted The following colleges were represented

PASSED

College	Year Grad	Per Cent.
Northwestern Univ Med School	(1906)	89 5
College of P & S Keokuk	(1901)	80 7
Baltimore Med Coll	(1906)	85 3
Harvard Med School	(1902)	87
University of Nebraska	(1906)	85 5
Creighton Med Coll	(1906) 75*	*79 2
Bellevue Hosp. Med. Coll	(1897)	80 1
Trinity University Toronto	(1904)	80 8

FAILED

College	Year Grad	Per Cent.
College of P & S Indianapolis	(1905)	49 2
University of Nebraska	(1905)	†61 6
Creighton Med Coll	(1906) 66*,	*74
Western Med. Coll, London Ont	(1904)	72 6

REGISTERED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with.
Rush Med. Coll	(1886)	Iowa
Northwestern Univ Med. School	(1900)	Illinois
Sioux City Coll of Med	(1905)	Iowa.
Drake University	(1906)	Iowa.
Kentucky School of Med	(1905)	Kentucky
University of Maryland	(1900)	Maryland
Central Med Coll St. Joseph Mo	(1905)	Kansas
Western Reserve University	(1882)	Ohio

* Second examination
† Fifth examination

Society Proceedings

COMING MEETINGS

Mississippi Valley Medical Association Hot Springs Ark, Nov 7 8
American Public Health Assn, Mexico City Dec. 3 7
Southern Surg. and Gyn Assn. Baltimore Dec. 11 13

BOSTON MEDICAL LIBRARY

Meeting, held Oct 17, 1906

Dr Richard C Cabot in the Chair

Treatment of Bacterial Diseases by Serum Therapy

Sir Almroth Edward Wright, London, England, said that bacterial diseases are the most important of all diseases But the therapeutic treatment of them has been most imperfect One hundred years ago by bleeding, large doses of antimony, etc, an attempt was made to fight the causes Next the expectant method was introduced The results were better than before, and this method is still largely employed By it nine out of ten typhoid fever patients may be saved But it is not satisfactory, for instance, in infectious endocarditis or in Malta fever Nor is it useful in those diseases where Nature makes no effort, for example in lupus, chronic bronchitis or the chronic discharge from the uterus or ear Expectant treatment covers but a small realm of disease and does it poorly Finally, the antiseptic treatment was introduced to be employed internally as well as externally But it has largely failed Septicemic diseases are not much affected by antiseptics, e g, typhoid fever or tuberculosis Even the skin is not usually much influenced by them, e g, acne The antiseptic kills only the germs with which it comes in contact and we can never assume that the germs are only in the spot treated If introduced into the blood, the antiseptic paralyzes the white blood corpuscle and prevents its phagocytic action on bacteria

Next with the safeguards of antisepsis, the surgical treatment was advocated and the word was extirpate This is the negation of all proper therapeutics As a result often the bacteria are thrown into the blood stream and conveyed as foci elsewhere, and a simple local disease becomes multiple or miliary Exposure of diseased parts to light of various kinds has been advocated The light does not kill the germs, but it does draw lymph to the part and hence help some cases just as poultices will, or as will the passive congestion of Bier's stagnation apparatus This last is valuable in smaller joints but fails with the knee or hip Finally the serum treatment has been tried but as regards streptococci it has been disappointing Hence the necessity to look elsewhere for a method of scientifically and satisfactorily treating bacterial diseases

The body itself by itself will often work a cure Therefore there must be in the blood beside the nutriment material which it certainly does afford the bacteria some antagonistic forces These are (1) the white blood corpuscles the phagocytes and (2) in the plasma some bacteriotrophic substances which act like antiseptics on the bacteria and prepare them for the digestion of the phagocytes These are styled opsonins A case cited was of a man with a [illegible] infection showing boils sycosis etc when [illegible] cles were compared with those of workers [illegible] ingest only half as many of healthy individual. This "opsonic index" was, therefore, 0 5 and when it was raised to 2 0 by Dr Wright's method of vaccine treatment, he was cured The normal opsonic index varies but little in healthy individuals After inoculation, at first it drops a little—negative phase, then comes a marked increase—positive phase, to be succeeded in turn by a gradual decline to nearly the same level as before. A large dose of vaccine makes a much larger negative phase and allows little, perhaps no positive phase, i. e., it does harm A small dose gives no negative phase and only a slight positive phase Hence, it is important to determine in each case what the proper dose of that vaccine is for that patient, in order to obtain a higher opsonic index. A single inoculation is not adequate We must repeat the dose. By too frequent doses we get a cumulation of negative phases with no chance for the positive phase to develop, and finally death ensues The body can not meet too great a stimulation by vaccine. Therefore, each case must be watched. Each inoculation is to be treated as a separate event, and the attempt made to so regulate the dose and the interval that there shall be, a cumulation of positive phases and a rise of the opsonic index, step by step, after each dose.

Patients with a localized bacterial disease have a low power of resistance, a low opsonic index, 0 6 to 0 8 Many of these cases may be benefited by gentle massage, which induces an autoinoculation followed by a negative and a positive phase just the same as after vaccination But there is marked danger The germs may be scattered, just as they sometimes are by a surgical operation, and the dose be so great A very marked drop is noted then in the opsonic index. Too thorough physical examination of a phthisical patient by a teacher and his class may produce the same untoward result. It is useful, however, to enable one to determine whether a focus is dead or still aglow, e g, in the spine Here a determination of the opsonic index, before and after a slight amount of motion, would at once determine the proper course of treatment. It is often necessary to increase this protective power and keep it high for a long period.

If the opsonic index is high, 1 6 to 1 8, it is of no use to try to make it higher by vaccine, and autoinoculations must be guarded against. Generalized septicemia always means autoinoculations Dr Wright cited a case and incidentally noted his belief that large doses of citric acid, given at once when a thrombus is formed, will decrease the coagulability of the blood and cause the prompt absorption of the thrombus A patient whose system is doing nothing to fight the bacteria can be stimulated by a vaccine to do something Sometimes several tests must be made in a single day Usually, once in ten days will be often enough Tubercular cystitis is one of the most satisfactory conditions for this method of treatment. An empyema or an unresolved pneumonia will yield. A case of cervical adenitis should yield in three months, doses being given three times in a month, the dose being so adjusted as to give the minimum negative phase Boils are nearly always cured by one or two inoculations Acne is much more resistant and requires two or three months Suppurative cystitis gives good results Vaccine from colon bacilli is always wise after an operation for gallstones Vaccine can always be made directly from the pus of an operation Hence, we may avoid a long operation by preparing the patient before with a vaccine The patient to be operated on for hair lip may be treated with a vaccine of the mouth streptococci and thus fortified against the later development of suppuration from that cause

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IDAHO STATE MEDICAL SOCIETY

Fourteenth Annual Meeting, held at Lewiston, Oct 4 5, 1906

Under the presidency of Dr. J B Morris, Lewiston

Officers Elected.

The following officers were elected for the ensuing year President, Dr L. P McCalla, Boise, vice president, Dr J M. Alley, Lapwai, secretary treasurer Dr E E Maxey, Boise, chairman committee of arrangements, Dr J L. Stewart, Boise, chairman committee on legislation, Dr W F Howard, Pocatello

Boise was selected as the next place of meeting

Resolutions Adopted.

The following report, made by a special committee appointed to consider recommendations contained in the secretary's report, was adopted

1 We recommend that the society at this meeting instruct its committee on legislation to work for the passage of a proper measure to regulate the sale of drugs and proprietary and patent" remedies

2. We recommend that this society express to Senator Heyburn, through its secretary, the appreciation of the profession of our state for his able and persevering efforts, together with his coworkers, in securing the passage of the national Pure Food Law

3 In the matter of the division of funds when new district societies are organized, it is recommended that the following plan be adopted as an equitable plan for dividing the funds of the original district society (1) let each district society, the new and the remainder of the old, be allowed the full amount of dues and membership fees collected for the year in which the new district society is organized, for their respective districts, and (2) that the remaining balance in the treasury of the original society be divided between, or among, the districts in the ratio of the paid membership in each district for the year preceding the organization of the new district.

4 It is recommended that the Idaho State Medical Society instruct its committee on legislation to act for the society, in conjunction with the State Board of Medical Examiners, in an endeavor to enforce the law regulating the practice of medicine in Idaho and it is further recommended that the campaign of organization be continued and that every effort be made by the committee on legislation and the members of this society in an endeavor to secure the passage of needed medical legislation at the next session of the legislature.

A. M A. Medical Education Standard Approved.

Dr. Maxey, secretary, presented the following resolution, which was adopted by the society

Resolved That it is the sense of this society that it commend the recommendations of the Council on Medical Education of the American Medical Association concerning the preliminary education required of candidates for the degree of doctor of medicine, that it recommends the adoption of this high standard of preliminary education by the State Board of Medical Examiners of Idaho and that it instruct the committee on legislation of the Idaho State Medical Society to endeavor to secure any necessary amendment to our medical laws as such standard of preliminary education may require.

Health Bill.

On motion, the following resolution was adopted

Resolved That the members of the Idaho State Medical Society are heartily in favor of a law providing for a state board of health and the registration of vital statistics, and hereby instruct their committee on legislation to use its influence at the coming session of the state legislature in an effort to secure the passage of a health bill similar to the one introduced at the last session of the legislature.

President's Address

Dr. J B Morris, Lewiston, emphasized the importance of a more thorough organization of the profession of the state, and suggested the formation of several new district societies as a means of getting the profession together He urged the members to use their utmost endeavor toward securing the passage of more stringent medical laws and to aid in enforcing state and national pure food laws He thought it would not be best, at the present time, to try to amend our medical laws, as has been suggested, to provide for reciprocity of state licenses

Insurance Examining Fees.

In the report of the secretary, Dr E E Maxey, he advocated an agreement of the physicians of the state to keep the rates for examining applicants for insurance not less than $5

Prevention of Venereal Diseases.

Dr J M. Taylor, Boise, read a paper on this subject

DISCUSSION

Dr J N Alley, Lapwai, thought the physician is to blame for a great many innocent infections Too many uncured patients are allowed to marry innocent girls He favors a campaign of education of the public that will enlighten the people as to the prevalence of venereal diseases, the difficulty of cure, the danger of innocent infection, and the proper methods of prevention He agreed with the essayist in that alcohol is a very material factor in the propagation of venereal diseases High living is another causative factor

Dr. C W Shaff, Lewiston, said that police surveillance has proved a failure, for the simple reason that examining physicians will not take necessary pains in their examinations of prostitutes He makes it a rule in his practice not to dis charge his patients with gonorrhea until at least two weeks after the gonococcus has disappeared from the discharge He lauded the influence of the Y M C A in keeping young men pure and clean, and thought that physicians should encourage young men to affiliate themselves with such institutions

Dr. R L Gillespie, Portland, found many cases of melancholia caused by gonorrhea He thinks that physicians should be moralists and give freely of their advice to the boy and girl just entering into manhood and womanhood The dark side and dangers of sexual dissipation should be explained to them, and he sees no reason why a young man should not be as virtuous as he expects his wife to be

Dr. C E Sears, Wallace, thought that there should be some set rule for saving that a man is cured, and suggested that in cases where a discharge still lingers, that the prostate should be massaged, the urine centrifugated and examined for gonococci every week for three months, before the patient can be considered cured

Neurasthenia and Melancholia.

Dr R. L Gillespie, Portland, read a paper on neurasthenia, and Dr John W Givens, Oro Fino, one on melancholia These two papers were discussed jointly

DISCUSSION

Dr W T Williamson, Portland, thought heredity an element that enters into the cause of nearly all cases of neurasthenia and melancholia He considers neurasthenia purely a nervous disease inasmuch as it has so far been impossible to discover its cause or pathology Melancholia is not a disease, it is only a symptom We are advancing in our classification of the types of insanity He did not agree with Dr Givens on the subject of discussing the suicidal tendency with melancholic patients He thinks it is a mistake to do so, because the patient's mind is more or less in a groove and any argument with or presentation of the subject to the patient is suggestive Such patients are not capable of reasoning and arguments usually excite antagonism He emphasized the beneficial effects of opium in the treatment of melancholia by driving away the patient's melancholic thoughts and thus obtunding the diseased mind This, with full feeding and proper exercise, is the best line of treatment

Dr R. L Gillespie, Portland, said that he did not wish to be understood as claiming that neurasthenia is a disease in the same sense as locomotor ataxia He believes it to be purely functional, but its pathology is not known These patients are in a groove and the more they think the deeper becomes the groove Children's habits should be better regulated Our school system is too rigid Excesses of every kind should be avoided Liquor, tobacco, late hours, etc., have no place in a child's life.

Dr J W Givens, Oro Fino, believes in discussing the subject of suicide with his melancholic subjects, as it will often strengthen the patient and enable him to resist the desire He said he is not afraid to discuss the patient's condition with him, but, of course one must know the patient's condition and use care He is of the opinion that we can overfeed these patients, as all of the digestive organs are more or less depressed and in no shape to be overburdened In his opinion, melancholia is caused by a perverted nutrition, and this gives the indications for treatment

Neglected Conditions of Childhood

Dr E. F Conyngham, Lewiston, read this paper

DISCUSSION

Dr R. C Coffey, Portland, stated that he has found that a large per cent of the nurses who enter the hospital before 21 years of age contract flatfoot But age is not the only factor as luxury previous to coming to hospital in large framed women seems also to be a predisposing cause He thinks that all children should go barefooted

Dr A C Smith Portland said that flatfoot never develops in children who have gone barefooted, and he thinks that all children should go barefooted

Dr. J N Alley Lapwai spoke of placing strips of sole leather in the shoe to raise the arch of the foot In his experience this has been very satisfactory

Dr. C E Sears, Wallace, said that in the use of the different appliances recommended for this trouble we forget that weakness of certain muscles is the cause of the deformity found, and appliances do not cure this weakness Severe cases must have weak muscles exercised

Diarrhea in Infancy and Early Life.

Dr Alex Hunter, Kendrick, contributed this paper

DISCUSSION

Dr C W Schaff, Lewiston, laid stress on the fact that we are yet unable to determine in many cases the causative factors in the diarrhea of infancy He stated that in Lewiston they had very few cases during the hot summer months, but in the fall, with the onset of colder weather, there is a marked increase in the number of cases

Dr. R. W Coffey, Portland, thought that the quality of the drinking water is to blame for most of these cases of diarrhea In Portland the leading undertakers state that since the city began using the Bull Run water, or pure water, the death rate from this disease has decreased about 20 per cent

Dr. C E Sears, Wallace, stated that at Wallace they had two sources of water supply—wells and city water The latter is piped for some distance from a mountain stream and is considered pure In the families using the city water he has found very few cases of diarrhea in children, while in families using well water there is an epidemic of diarrhea every year

Dr J W Givens, Oro Fino, said that in the treatment of these cases he found it advisable to follow the suggestions of Christopher concerning the diet When the stool smells sour, cut out hydrocarbons and feed the child a nitrogenous diet, and when the stool smells foul and very offensive, cut out nitrogenous diet and feed on hydrocarbons, such as rice water, barley water, etc Albumin water is an excellent food in most cases It is often a problem to know what to do for these little fellows The season of the year is not altogether the cause of these conditions Watermelons and fruits unquestionably have causative effect. In his treatment of diarrheal conditions he has secured excellent results from the free use of mineral water, boiled milk and black pepper

Surgical Anatomy of the Mastoid Antrum.

Dr. C W Shaff, Lewiston, read this paper

DISCUSSION

Dr A C Smith, Portland, has often found it very difficult to find the triangle spoken of as a guide in locating the antrum He thought a better plan is to use the external meatus as a point of base A horizontal line passing through the upper half of the external meatus, and extending posterior far enough (about one fourth inch) to the free posterior wall of the canal, will represent the lower and anterior limits of the bone incision He contended that it is better to take a chance of cutting into the sinus than to leave a portion of the diseased bone The hemorrhage can be controlled by a firm packing of iodoform gauze With the facial nerve it is different. If it is possible to avoid injury to this structure it must be saved, but even here, if it is necessary to sacrifice the nerve rather than to leave diseased bone, the nerve should be cut.

Dr R. C Coffey, Portland, agreed with Dr Smith that there are cases in which we are compelled to disregard all rules as laid down for guidance in operating on these cases The surgeon must have a clear head must know his anatomy, and use his best judgment in treatment of each case.

Obstetrics in Country Practice

Dr W A Rothwell Kendrick contributed this paper

DISCUSSION

Dr. S E Bruce Lewiston, took exception to the use of the antepartum douche, claiming that it is not only useless but often injurious

Dr. E L Burke Culdesac thought that the diagnosis of the presentation is important It is not unusual to prolong the use of forceps because of the failure to diagnose the presentation as a difficult one

Diagnosis and Treatment of Gastric Ul[illegible]

Dr. Chas F Sears, Wallace, [illegible]

DISCUSSION

DR J F HURLBURT, Lewiston, said that this condition is often very confusing The symptoms may not appear in their regular order, and not infrequently the first indication of an acute gastric ulcer is the hemorrhage He is in doubt as to the indications for surgical interference

DR. R C COFFEY, Portland, stated that the Mayos never operate on a gastric ulcer case until the patient has seen and tried the treatment of at least seven medical men Ante mortem inspection has thrown much light on this condition It is now known that the vast proportion of the chronic, incurable cases of dyspepsia are caused by chronic gastric ulcer Rodman treats these cases for four weeks when, if there is no improvement, he considers them surgical

DR A. C SMITH, Portland, believed that surgery is in a period of evolution The objectionable features of gastro enterostomy are gradually being eliminated, but gastroenterostomy will continue to be done posteriorly, with short loop and elimination of the pylorus He is of the opinion that the pyloroplasty of Finney will be the operation of the future for these cases With this operation there are fewer adhesions and the pylorus is preserved

Peritonitis and Intussusception

DR. T J COSTELLO, Lewiston, read a paper on "Surgical Treatment of Peritonitis," and DR. R C COFFEY, Portland, one on "Intestinal Intussusception" These two papers were discussed jointly

DISCUSSION

DR. A. C SMITH, Portland, said that the two main features of the treatment of peritonitis are posture and drainage Elaborate work of any sort should be avoided at operation, and local anesthesia should be used in as many cases as possible Females are often drained to advantage through the vagina The mortality is high in, gangrenous cases of intussusception on account of their acute intensity, and he believed it will always remain high He thinks the radical operation will be done less in the future and that physicians will be more inclined to temporize The ileo-cecal anastomosis with the Murphy button is very often a good operation, leaving the gangrenous portion to slough off He prefers the lateral anastomosis as it is easier and more quickly done.

DR C E SEARS, Wallace, said that early diagnosis gives the best means of saving these patients, and the earlier the operation is done the better the results He thinks that the empty intestine and the prevalence of colic, in infants, are important etiologic factors in intestinal intussusception

DR. R I NEWELL, Spokane, thought that there is some question as to the advisability of using rectal salines because of the fact that such injections tend to excite peristalsis and increase the amount of invagination

DR R C COFFEY, Portland, said that no one operation is applicable to all forms of intussusception, and that the operation done by him on this case should probably be limited to chronic cases In regard to the treatment of peritonitis, besides drainage, he puts the patient in almost an erect sitting position about 60 degrees, using a double inclined plane for back and leg rest. It is a radical modification of the Fowler position, and he thought, should be called postural position

Value of Blood Examination in Surgery

DR R I NEWELL, of Spokane, read this paper

DISCUSSION

DR C E. SEARS, Wallace, emphasized the point that the value of the white blood count in appendicitis and peritonitis is not in the single count, but in the results of a series of consecutive counts He considers a single count as of practically no value whatever

DR. R. C COFFEY, Portland, said that our knowledge of the pathology of the blood is continually changing and enlarging At present the tendency is to study the kinds of white blood cells found An abnormal excess of the polymorphonuclear cells is considered of more diagnostic value than a hyperleucocytosis

The Therapeutic Limit of Mechanical Therapy

DR. SUSAN E BRUCE, Lewiston, read this paper

DISCUSSION

DR. W A. ROTHWELL thought that mechanical therapy, if used in connection with common sense and regularity of time for going to stool, is of great value in the treatment of constipation.

DR R L GILLESPIE, Portland, said that massage undoubtedly has its place in therapy, but it can be overdone The question of diagnosis is so important, however, that massage in ignorant hands is apt to do as much harm as good. Massage is acknowledge to be an excellent treatment for constipation, but it must not be carried too far, nor should other rational methods be excluded

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Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice Proper inquiries concerning general formulæ and outlines of treatment are answered in these columns]

Varicella

In cases of varicella, isolation should be practiced, according to the *Cyclopedia of Med and Surgery* The child should, as a rule, be put to bed for a day or so and sponged once or twice daily with a warm carbolized solution, carbolized lanolin being applied to the spots to allay the itching Later, when the crusts have formed, the following combinations may be applied

℞	Acidi carbolici	m xv	1
	Acidi borici	ʒiss	6
	Glycerini	ʒiii	12
	Aquæ rosæ	f℥i	30
	Aquæ q s ad	f℥iv	120

M Sig Apply to the affected parts once a day Or

℞	Acidi carbolici	m v	30
	Ichthyoli	ʒiss	6
	Petrolati liq q s ad	℥i	30

M Fiat unguentum Sig Apply locally on a soft cloth. Or

℞	Ichthyoli	gr x	65
	Ung zinci oxidi	℥i	30

M Fiat unguentum Sig Apply locally on a cloth

Acute and Chronic Bronchitis.

As a combination in the treatment of acute bronchitis, Stevens recommends the following

℞	Vini ipecacuanhæ	fʒiss	6
	Potassii citratis	ʒiii	12
	Tinct. opii camphoratæ		
	Syrupi acaciæ, āā	f℥i	30
	Aquæ q s ad	f℥vi	180

M Sig One tablespoonful every four hours in water

When the condition tends to become subacute the following combination is advised

℞	Terebeni		
	Olei eucalypti, āā	fʒss	2
	Strych sulphatis	gr 1/3	02
	Codeinæ sulphatis	gr ii iii	12 20

M Fiant capsulæ No xii Sig One capsule every four hours

In the chronic form the following combinations are of value

℞	Terebeni		
	Olei eucalypti		
	Olei santali, āā	fʒi iss	4-6
	Codeinæ	gr iii vi	20 .25

M. Fiant capsulæ No xxiv Sig One capsule after each meal and at bedtime Or

℞	Terpini hydratis	ʒi	4
	Guaiacol carb	ʒii	8
	Strych sulphatis	gr ss	03
	Codeinæ	gr iii	20

M. Fiant capsulæ No xxiv Sig One or two capsules three or four times a day Or

℞	Apomorphinæ hydrochlor	gr ss	03
	Syrupi pruni Virg	f℥ii	60
	Syrupi picis liquidæ	f℥iv	120

M Sig One tablespoonful three times a day in water

As an inhalation the following combination is of value, according to Stevens

R	Chloroformi	fʒss i	2 4
	Creosoti		
	Terebeni		
	Olei pini Sylves, āā	fʒiss	6
	Alcoholis q s ad	f℥i	30

M Sig From 5 to 20 drops to be used in the inhaler three or four times a day

Leucorrhea

This condition is caused by a hypersecertion of the vaginal glands or those of the cervical canal of the uterus According to Hare, in his "Therapeutics," this condition is dependent on many causes for its existence, such as a catarrh of the Fallopian tubes, a general plethoric condition or a state of anemia from any cause

The treatment of leucorrhea, according to Hare, may be directed toward internal medication, with the hope of remedying the condition or by local applications Some authorities advise strongly against any local treatment, especially when leucorrhea exists with the pregnant state They believe that frequent antiseptic douchings destroy the epithelia and render the mucous membrane less able to withstand bacterial invasion To correct the anemia which is so frequently present in these cases, Hare advises the following combinations

℞	Acidi arsenosi	gr ¼	015
	Ferri reducti	gr v	30
	Quin sulphatis	gr xxx	2

M Fiant pilula No xx Sig One pill three times a day

Or

℞	Tinct ferri chloridi	fʒi	4
	Tinct cinchonæ co	f℥ii	60
	Tinct gentianæ co q s ad	f℥iv	120

M. Sig One dessertspoonful three times a day, *after* meals

This author states that small doses of the sulphate of iron are better than too large doses, owing to its astringent properties, at the same time the bowels must be carefully watched

The local applications should consist in counter irritation and vaginal injections, or painting the vaginal mucous membrane over with proper applications, such as a mixture of iodin, carbolic acid and chloral, as follows

℞	Iodi resublim	ʒiv	15
	Acidi carbol. crys		
	Chloralis hydratis, āā	℥i	30

M Rub the iodin and chloral in a glass mortar into a powder and add the carbolic acid Sig To be applied by the physician to the parts involved

Astringent injections, according to Hare, are advisable A very cheap astringent may be prepared by making an infusion of powdered white oak bark in a pint of water The following combination may be used for the same purpose

℞	Glycerini	℥i	30
	Acidi tannici	℥i	30
	Aquæ dest	Oiv	2000

M Sig To be used as a vaginal douche.

Or the following combination, according to Ringer, may be employed

℞	Sodii bicarb	ʒi	4
	Tinct belladonnæ	fʒii	8
	Aquæ	Oi	500

M Sig To be used as a vaginal wash

When the leucorrheal discharge is fetid the following combination is advised

℞	Potass permanganatis	ʒss	2
	Aquæ	Oi	500

M Sig As a douche

In purulent vaginitis, specific or otherwise, the following is advised

℞	Creolin	fʒss i	2 4
	Ext hydrastis canaden flu	fʒiiss	10
	Aquæ	f℥viii	240

M Sig Two tablespoonfuls to a pint of hot water, shake thoroughly and use as an injection

He mentions the fact that when vaginal injections are used large quantities—from three to four liters—should be used at a time The following astringent solution is a very good one

℞	*Zinci sulphatis*		
	Alum sulph., āā	ʒi	4
	Glycerini	f℥vi	180

M. Sig One tablespoonful to each quart of water, as an injection

When cases of vaginitis come on acutely some authorities advise rest in bed with a mild purgative along with the vaginal douches, which should consist of a gallon of hot boric acid solution, one teaspoonful of the powder to each pint of water or a 1 to 5,000 bichlorid of mercury solution After the acute symptoms have subsided and the trouble becomes more or less localized, the inflamed areas may be touched with a silver nitrate solution of from 5 to 10 per cent. strength

Epilepsy

The essential feature in the pathology of epilspsy, according to M R. Hughes, in the *Kansas City Medical Record,* is the alternating state, irritation and paralysis of the vasomotor mechanism of the brain and allied nervous system, but chiefly the brain It is a functional vasomotor disease and alternating vasomotor condition of transitory paralysis and irritation, the irritation causing the contraction of the arteriole supply of the convulsive area involved. There is also ventricular dilatation, according to this author, caused by the excess of cerebrospinal fluid producing the coma and its symptoms He states that no epileptic brain where death came in the status has ever been found with undistended ventricles Petit mal attacks consist in a lesser vasomotor paralysis and lesser arteriole contraction involving the same motor area

In the treatment of the disease, W Runge, in the *British Medical Journal,* states that the diet should be unirritating and that indigestion and overloading of the stomach must be avoided It has been found, however, that neither a vegetarian nor meat diet affects the number of fits Exercise in the open air, without overexertion, is recommended Among the medicinal preparations mentioned, lithium carbonate is one advised in cases in which there is no unusual output of uric acid, and while the author mentions a great many recent preparations which have been experimented with in the treatment of this disease, he states that the bromids still remain prominent as a therapeutic agent of epilepsy Potassium bromid is considered the most effective preparation or when this can not be given, sodium bromid, ammonium bromid or lithium bromid are recommended He mentions the fact that strontium bromid has been found of value by some authorities on the ground that the system is more tolerant of this preparation than of the potassium bromid while the effect is equally as great The important point that he brings out in the treatment of epilepsy is that the administration of the bromid should be continued over a long period of time There are many opponents, however, to this preparation in combating the epileptiform attacks basing their skepticism either on the poor results obtained in some cases, or on the fear of bromism in other cases Other authorities however, state that this latter fear is overdrawn and that the careful administration of the bromids will as a rule prevent the appearance of bromism The digestion, of course, must be kept in the best possible condition by giving the patient large quantities of milk along with mineral waters in order to increase the excretion of solids through the kidneys

When the heart is affected potassium bromid must be administered with care, and in some cases must be entirely avoided If there is increased salivation the author recommends tannin and hyoscyamus, for acne some preparation of arsenic is advised in combination with the bromids The idea is still maintained that the diet should be poor in sodium chlorid as a means of rendering the bromin more effective This idea is based on the fact that the bromin in the system takes the place of chlorin, con [illegible] ly a [illegible] con tains but a little sodium ch [illegible] sensitive to bromid

Runge speaks of the d [illegible] th [illegible] ment in that the patient [illegible] t and to remedy this condition the idea of using sodium bromid in the bread instead of common salt was introduced by Balint His diet was as follows From one half to one quart of milk, from one half to one dram of butter, three eggs, from 300 to 400 grams of bread and fruit This diet contains two grams of salt and three grams of the bromids Gowers recommends the combination of bromin with belladonna, digitalis and iron, while Brech advises strychnin with the bromid Bechterew, according to the author, recommended giving the bromids in combination with infusum adonis vernalis In some of his cases codein was combined with the bromids and was found to be very effective when the bromids alone failed D R. Brower of Chicago has had wide experience with both of these combinations with very beneficial results

In summing up his article, the author states that the epileptic should order his whole life with reference to his disease, a suitable diet and a peaceful life is of great importance as well as the nature of his occupation. In general traumatic epilepsy he advises a bromid treatment, especially if after the injury general convulsions with loss of consciousness come on On the other hand, trephining is to be preferred if at first there is only partial epilepsy and if the convulsions begin in a particular group of muscles, or if there is a localizing aura, especially if this aura can be produced by pressure on a scar Typical Jacksonian epilepsy, whether traumatic or not, should always be treated early by trephining For this purpose he recommends Horsely's method of excising the cortex involved. The long course of the bromid treatment should always follow the operation.

According to Italian investigators, who have made a study of the influence of diet in epilepsy free from salt and reduced in salt, the salt free diet notably diminishes in all epileptics the number and severity of the attacks In some cases they were kept away for several months While in the reduced salt diet the number of fits was only diminished. To reduce the number and violence of attacks it was generally necessary to give small doses of bromid along with this diet, especially in the severe forms of the disease According to their experience, a salt free diet alone or in combination with the bromids, even when kept up for some years, did not produce on the patient any disturbance of the general condition of either the body or the mind

Medicolegal

Sufficient Evidence of Severe Injury to Testicle Without Immediate Pain—Inferences Seemingly Opposed to Natural Law

The Kansas City Court of Appeals says, in the personal injury case of Dunphy vs St Joseph Stockyards Co, that when one of the company's switch engines was derailed the plaintiff was sitting sidewise on the front drawhead with one foot on the footboard to partially support his weight, and with the projecting head of an iron pin in front of his privates He claimed that the concussion from the derailment produced the wounding of his scrotum by the hard substance on which he was sitting Whereas the company insisted that, under the facts disclosed by the plaintiff, it was physically impossible for him to have sustained the injuries of which he complained in the manner claimed by him

According to the plaintiff, he experienced no pain at the time in the parts affected, and did not know he had been hurt until perhaps an hour afterwards He did immediately suffer from nausea of some severity, but made no complaint When the engine was replaced on the track, he resumed work and worked through the day His testicles begun to pain him about an hour after the injury, and the pain increased during the day After he went home in the evening, he complained to his brother of his injury, and both examined the injured parts Two blue marks were discovered on opposite sides of the surface of the bag, indicating that it had been severely pinched The next day he reported for duty and worked after a fashion, but was greatly distressed by the pain, which was then quite severe and continued to increase He attempted to work during the next two days, and then was compelled to cease on account of the injury The day he quit work he consulted a physician, who directed him to go to bed and use hot flaxseed poultices He remained under that physician's care about a month, and then employed another one, who treated him for several months, and then found it necessary to remove one of the testicles on account of its rotten condition.

The company insisted, and in this was supported by the expert testimony it introduced, that it was utterly impossible for the testicle to have received an injury from a blow or from sudden compression of such severity that degeneration would follow without the accompaniment of intense pain, and, since the plaintiff admitted he suffered no pain, the court was asked to declare that he received no injury to his testicles from the negligence charged The company argued and attempted to prove that the plaintiff for a year or more preceding the occurrence in question had been afflicted with gonorrhea The whole fabric was built on an admission made by him that about one year before his injury the physician of a relief association had examined him and told him that he had the disease But the court says that this was purely hearsay and devoid of probative value The plaintiff vigorously denied that he had the disease or any of its characteristic symptoms The physician who first treated him gave him no treatment for it, and the second one stated that he found no evidence of its presence

Therefore the court was confined, it says, to the consideration of a single question Was the inference that the plaintiff's injury resulted from a blow or bruise received during the derailment so plainly opposed to natural law as to compel its rejection? It is well settled that courts will not stultify themselves by giving any heed to the testimony of witnesses or the inferences deducible therefrom that are so opposed to all natural law and reasonable probability as to be manifestly false On the other hand, courts should observe the utmost caution to avoid assuming knowledge of natural facts and laws that are beyond the scope of common positive knowledge The mysteries of nature are so manifold, deep, and subtle that the finite mind can not indulge in dogmatic conclusions respecting them without falling into error Human nature, being microcosmic, is not certainly known save in its most prominent outlines Different men in their physical characteristics differ as widely as they do in outward appearance No two individuals are alike, and, when the court is called on to apply procrustean rules, it should see to it that they fit all alike It has been said that one man's meat is another's poison What will kill one man will hardly injure another, and what will cause excruciating pain to one is often quite painless to another The second physician, a reputable and skilled one, reached the conclusion from his knowledge of the case and its history that the plaintiff's condition was the direct result of the injury of which he complained. His process of reasoning was rational and plausible. In his opinion, intense pain does usually accompany a violent injury to the testicles, but the presence of pain and its degree depend on the physical peculiarities of the subject, the nature of the injury, and the circumstances under which it is received In his science, he knew of five causes that could have produced the degeneration, cancer, syphilis, gonorrhea, tuberculosis and external injury His investigations disclosed no evidence indicating the presence of the first four mentioned By exclusion but one cause was left that could have produced the condition before him, and this he accepted as the real cause Although it seems extraordinary that the plaintiff should have escaped immediate pain, the court can not say that this fact made his injury in the manner charged a physical impossibility There was no error in treating this issue as one of fact A judgment for the plaintiff for $2,000 is affirmed.

Liability of Railroad Company to Surgeon Under Rules

The St. Louis Court of Appeals says that the case of Hays vs Wabash Railroad Company was brought to recover for professional services rendered by the plaintiff in the treatment of a man injured while a passenger on one of the company's trains At the time the plaintiff was the local surgeon of the company, and also local surgeon of a hospital association composed of and supported by the employés of the company The conductor of the train on which the man referred to was injured telegraphed to the plaintiff, informing him of the injury and asking him to meet the train and take charge of the man, which he did, having him removed to the hospital of the employés' association, where he operated on him and continued to treat him until he was discharged from his employment by the company He reported the case to the chief surgeon of the hospital association, but did not report it to the company's chief claim agent, although the uncontradicted evidence was that it was his duty to do so and he was furnished with blanks for the purpose The chief claim agent testified that on receipt of such reports he determined whether or not the company would bear the expense of medical and surgical treatment for injured passengers, and that no local surgeon was authorized to treat an injured passenger at the expense of the company without the consent or direction of the proper claim agent The company, the evidence also showed, paid the man's hospital bill.

One of the company's rules was "In case of wrecks or accidents where a number of persons, either passengers or employes, are injured and require immediate attention, summon at once the nearest competent surgeon, summon at the same time whichever local surgeon can be gotten to the scene of the accident most quickly, and notify by wire at once the nearest hospital and the chief officers of the road, giving full particulars as to the names and whereabouts of the injured persons, the name of the surgeon in attendance and stating what further action is required for the relief of the injured" Another rule was "The hospital, dispensary and local surgeons who have heretofore, or may hereafter be appointed by the chief surgeon of the hospital association to such positions in connection with the hospital association, are hereby appointed local surgeons of this company for the care and treatment, under the rules hereinbefore established, of all passengers, citizens and non employés who may be injured by this company's lines, and they shall be summoned if possible in all such cases, and as such will be respected and assisted in the discharge of their professional duties, when called on"

The court holds that, in meeting the train at the depot, in response to the conductor's telegram, taking charge of the man and removing him to the hospital, and there treating him for such reasonable time as the company's claim agent could have been notified of the case and his answer returned, the plaintiff acted strictly within the terms of the first rule quoted above and as he did not agree to render gratuitous services for the company, was clearly entitled to recover the reasonable value of his services rendered during such time Again, referring to both rules, it says that it was plain that under these rules the plaintiff had authority in the first instance, to treat the man at the expense of the company, the question arising when, if at all (before the plaintiff's discharge as local surgeon), his authority ceased The conclusion is that the plaintiff's recovery should be confined to services rendered in the circumstances stated above with reference to the application of the first rule

The report to the chief surgeon of the hospital association, the court says, did not excuse the plaintiff's failure to report to the general claim agent, whose testimony was that he alone had authority, after receiving such report, to determine whether or not an injured passenger should be professionally treated by the company's surgeon. Nor does the court think that the effect of this rule or custom of the company was avoided by the fact that two assistants of the claim agent had visited the town to investigate the facts of the injury, one of them making a personal request of the plaintiff to cure the man, it further appearing that the agency of the one making the request did not include jurisdiction over personal injury cases, while there was no evidence that the other assistant claim agent said anything about treating the man, and while the general claim agent testified that he never heard of the case until he heard of it through the plaintiff's attorney But a rule of the company which stated that because it donated to the hospital association the use of its telegraph and train service to facilitate the care and treatment of sick or injured employés all persons in the company's service, and all others, were notified that no bills for medical or surgical services, etc., would be paid by the company, unless the same were first authorized by the general claim agent, the court holds was inapplicable to cases of injuries to passengers

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York.

October 20

1 *Angina Pectoris Its Mechanism and Treatment. F Hare, London, England.
2 Diagnosis and Treatment of the Acute Infections of the Gall Bladder L. W Hotchkiss New York
3 *Illustrative Cases of Prostatic Carcinoma. J B Squier, New York.
4 *Koplik Spots Their Relation and Interest to Laryngologists. H G Langworthy Dubuque Iowa.
5 The Medical Museum D B Delavan New York.
6 *Dried Tetanus Antitoxin as a Dressing for Wounds J J Kinyoun, Glenolden Pa.
7 *Case of Intestinal Obstruction in a Child Due to Tuberculous Peritonitis Following Bronchopneumonia. H H Pelton, New York.
8 *Disinfection of Rooms by Formaldehyd Comparative Bactericidal Value of Various Methods. H A. Higley, Brooklyn N Y
9 *Perforative Appendicitis Caused by a Foreign Body F H Jackson Houlton Maine.

1 **Angina Pectoris.**—Hare states that the pain of angina pectoris depends on vascular distension in the mediastinum, which is the result of a more or less localized vasodilatation and of a more or less generalized peripheral vasoconstriction. Two other factors in the mediastinal distension which have to be considered are the work done by the left ventricle and the integrity of the mitral valve Whatever reduces the work of the left ventricle will reduce the distension, and *vice versa* The integrity of the mitral valve is essential for the development and maintenance of the mediastinal vascular distension Inhalation of amyl nitrite is the most prompt and reliable means of relief in most cases Iodid of potassium in large doses affords in many cases marked relief from the tendency to the recurring paroxysms

3 **Prostatic Carcinoma**—Squier emphasizes the futility of the endeavor to do more than palliate the patient's sufferings by operation when he is the victim of prostatic carcinoma If the disease is at all advanced, the majority of patients live longer if palliative measures are employed than by extensive radical operation Squier found that permanent suprapubic drainage gives great comfort to the patient

4 **Koplik Spots**—Langworthy has noticed that Koplik spots appear earliest on the mucous membrane near the angle of the mouth and in areas covered by the gums A strong, clear light is essential

6 **Dried Tetanus Antitoxin as a Dressing for Wounds.**—Kinyoun has applied antitoxin to abrasions, or incised, contused and lacerated wounds, and also a number of suppurating wounds with a view of preventing tetanus These injuries healed more rapidly and with less disturbance than had been previously observed in those treated in the ordinary way It has been demonstrated, he states, that the powdered serum was responsible for the good results A number of infected wounds due principally to vaccination and furunculosis have been treated in like manner In these cases healing rapidly resulted The powdered tetanus antitoxin was also used once in a nasal operation The wound healed within a week These results showed that the dried serum possesses qualities other than its specific body, the antitoxin This must be of the nature of an immune body

7 **Intestinal Obstruction Due to Tuberculous Peritonitis Following Bronchopneumonia**—Pelton describes the case of a child, less than a year old, that had an attack of broncho

pneumonia in February As the signs in the chest and elevated temperature did not entirely disappear, the possibility of tuberculous involvement of the bronchial glands and lungs was considered The patient was removed to the hospital in the last part of March in a state of marked prostration The abdomen was full, distended, tense and tympanitic, except in the flanks, where there was shifting dulness There was general tenderness, more marked on the right side, and moderate general rigidity Rectal examination was negative Exploratory laparotomy revealed small miliary tubercles about the cecum where adhesions were most abundant. At the cecum a hard, movable mass in the lumen of the gut was felt The mass was pushed on into the transverse colon, and the wound was closed. Death took place about two hours later Autopsy was not permitted.

8 **Disinfection of Rooms by Formaldehyd**—Higley declares that formaldehyd gas, when placed under proper conditions and in sufficient quantity, is a powerful bactericidal agent This action, however, is limited to the surface of objects with which it comes in contact, its penetrating power being practically nil. He has investigated different forms of apparatus for producing and evolving formaldehyd gas In the tables which he presents the best comparative bactericidal results were obtained with the lime method

9 **Perforative Appendicitis.**—Jackson describes a case of perforative appendicitis which came under his care. A diagnosis of an exacerbation of a chronic appendicitis was made, and operation advised When the peritoneum was opened a large amount of bloody serum poured out The omentum was highly congested and was adherent to the cecum and completely enveloped the appendix A pointed object was felt projecting through the omentum It proved to be a fish bone an inch and a quarter long

Boston Medical and Surgical Journal

October 18.

10 *Small Fibroma of the Ileum Resulting in Obstruction of the Bowel with a Consideration of Various Forms of Benign Intestinal Tumors J W Dewis, Boston
11 *The Bier Treatment of Infections and Septic Wounds of the Extremities. E A. Codman Boston

10 **Obstruction of Ileum by Fibroma.**—Dewis reports the case of a woman aged 64, who for ten years suffered from obstinate and persistent constipation and occasional vomiting spells, without pain, and without relation to the ingestion of food After partaking of a very hearty dinner she was attacked suddenly by severe abdominal pain and distress, vomiting of offensive material and symptoms of collapse The abdomen was protruded, tympanitic and tender Death ensued six days afterward, resulting from shock On opening the abdomen there was found in the region of the ileocecal valve an intussusception about 2 inches long, with a round, movable body attached to the lower end Growing from the wall into the lumen of the intestine, about 4 inches above the ileocecal valve, and lying over the edge of the invaginated portion was a small oval tumor, dark red brown in color, which was found to be a fibroma Dewis believes that the acute obstruction was caused by the tumor He reviews the literature on this subject and appends a long list of references

11 **Bier Treatment of Infections of Extremities**—Codman is very much impressed with the clinical value of the Bier treatment of infections and septic wounds of the extremities The treatment is applied in the following manner When an old (i e, one who has been seen before) patient arrives in the morning his dressing is taken down and the wound examined and its condition recorded. A rubber strap two inches wide and provided with a buckle is applied about his arm or leg well above the lesion This is drawn as tight as possible without stopping the pulse The wound is covered with moist corrosive gauze and the patient sits down and waits an hour The part is looked at from time to time to be sure that the circulation is not too greatly checked. At the end of the hour a moist dressing and splint are applied. The wound is not as a rule packed or drained. The same routine is followed each day The cases which did the best were suppurations of the staphylococcus type, while the streptococcus or erysipeloid type has been less remarkably affected

The New York Medical Journal.

October 20

12 *The Salt Free Treatment of Epilepsy, Apropos of Thirty seven Cases. A Gordon Philadelphia.
13 *Eczema A Sketch of the Process and Its Management. J C. Johnston New York
14 *Radical Mastoid Operation Modified to Allow the Preservation of Normal Hearing W S Bryant New York
15 Dwarfed and Deformed Mastoid a Sequel to Imperceptible Mastoiditis Complicating Chronic Suppurative Otitis Media. W E Driver Norfolk, Va
16 Improved United States Inspection of Animals Meat and Meat Food Products D A. Hughes Omaha Neb
17 La Médecine and Le Médecin in Molière. W B Konkle Montoursville, Pa.
18 Postmortem Findings in Gastric Ulcer M. R. Barker Chicago
19 *Gastrointestinal Disturbances Associated with Migraine J A Lichty, Pittsburg Pa.
20 *Fatal Case of Scopolamin Poisoning G W Ely Pittsburg Pa*

12—See abstract in THE JOURNAL, Oct 20, 1906, page 1323

13 **Eczema.**—Johnston reviews the clinical history of this affection and presents particularly a very thorough study of its histopathology

14 **Modified Radical Mastoid Operation**—Bryant describes a modification of the radical mastoid operation in patients who had good hearing up to a short time before the operation These, he says, are usually cases of acute extensive involvement of the temporal bone, more rarely cases of chronic purulent otitis media, in which the sound conducting mechanism has been retained more or less intact The object in these cases is to remove all the diseased bone and to produce perfect drainage, while at the same time preserving the auditory function of the middle ear The ligamentous attachment and mucous membrane reduplications of the ossicular system lie between the epitympanum and the atrium, and prevent through drainage, though they allow drainage from both their upper and lower surfaces To establish this drainage Bryant makes a U shaped myringotomy to drain the atrium, and opens the mastoid antrum to drain the epitympanum It is also necessary to remove all the diseased bone to arrest the progress of the infection and open all the cells of the middle ear system to throw them into one cavity leading to the epitympanum The outer anterior wall of the antrum should be wholly taken away, except enough to support the annulus with the adjacent membrana tympani The suspensory ligament of the malleus must be protected from injury, also the fan shaped ligament of the incus By these procedures it is possible to drain the upper and back part of the tympanum through the mastoid wound, and the lower anterior part through the meatus without permanent injury to the sound conducting mechanism A case in point is cited

19 **Gastrointestinal Disturbances Associated with Migraine**—Lichty adds 108 cases to 73 cases previously reported in which gastrointestinal disturbances were associated with migraine He thinks that it is decidedly an hereditary disease Of the 181 cases, 116 gave a definite hereditary history, and only a few gave no hereditary history at all. Of the whole number 155 were females and 26 males Ninety had prolapse of one or more of the abdominal organs, most often the right kidney One hundred and thirty seven patients gave a definite history of digestive disturbances between the attacks, such as heaviness after eating, pyrosis, fermentation, constipation or diarrhea One hundred and one gastric analyses were made There were 32 cases of hyperacidity, 24 cases of hypoacidity, and 25 were normal By regulating, or leveling up, as Lichty calls it, digestive disturbances, he succeeded in accomplishing fairly good results Bromids and cannabis indica are the only two drugs he used

Lancet-Clinic, Cincinnati

October 20

21 Relief of Pain in Labor W Gillespie Cincinnati

American Journal of Obstetrics, New York

October

22 *Careful Study of the Parametrium in Twenty Seven Cases of Carcinoma Cervicis Uteri, and its Clinical Significance. J A Sampson Albany N Y
23 *Urethral Bacteria as a Factor in the Etiology of Cystitis in Women. F J Taussig St. Louis
24 *Evolution of Modern Cystoscopic Instruments and Methods L. Peters Columbia.
25 Cystocele. J R Goffe New York.

26 The Operative Treatment of Cystocele in the Past One Hundred Years C G Child Jr New York
27 The Construction of a New Vagina A Brothers New York
28 A Fatal Case of Eclampsia After the Delivery of Twins Remarks on the Etiology and Pathology of the Disease C G Parnall Jackson Mich

22 **The Parametrium in Carcinoma Cervicis Uteri**—Sampson was able to demonstrate cancer either in the parametrium, the pelvic lymph nodes or both, in 20 out of 27 specimens studied, and furthermore the pelvic lymph nodes were not removed in 3 of the 7 cases in which the growth was apparently local, thus suggesting that it may not have been local in all of these 3 cases In 3 of the 10 specimens in which cancer was not found in the parametrium, it was found in the pelvic lymph nodes, i e, a small primary growth had metastasized to the pelvic lymph nodes without apparently infecting the parametrium through which it had passed The parametrium was found involved in 17 instances, 8 times by direct extension alone, either *en masse*, or in the form of thread like processes frequently along the lymph channels or in the nerve sheaths, 3 times by metastases in the lymph structures of the parametruim without any evidence of a direct extension of the disease beyond the cervix, and in 6 cases both forms of invasion were present In the 9 instances of metastases in the parametrium, the lymph nodes were involved in all but one case, and in only one case was the metastasis apparently in a lymph channel

Adhesions, from pelvic inflammatory disease, independent of the cancer, may make the cancer appear more advanced than it is, by causing pain which may wrongly be attributed to the cancer The presence of a direct extension of the disease into the parametrium is usually accompanied by a reaction on the part of the surrounding tissue, which manifests itself by a cellular infiltration or hypertrophy of this tissue, thus causing induration in addition to that which may be caused by the cancer The parametrium may feel indurated and yet show no evidence of the cancer in it A parametrium may feel normal and yet contain cancer, occasionally as thread like extension but probably more often as metastases The pelvic lymph nodes are involved in from one third to one half of the operable cases, and only by the microscope can it be determined whether they are cancerous or not

The primary growth may be limited to the cervix, and yet it may have metastasized to the pelvic lymph nodes, or the former may be large and the latter nodes free A wide excision of the parametrium is demanded, first, because it is so frequently involved, 17 out of 27 cases, and secondly, because the growth is local in from one half to two thirds of the operable cases, and probably even in 40 per cent of the extensive ones Sampson believes that in probably half of the cases of cervical cancer seen at the present time there has been a history of neglected uterine bleeding for over six months this was true in the 27 cases reported here A short period of neglected uterine bleeding or other symptoms referable to uterine trouble, may permit the growth to extend so far that the disease becomes incurable

23 **Urethral, Bacteria in Cystitis in Women**—Taussig states that the normal urethra free of disease is sterile in only a small proportion of cases In his series of 45 cases it was sterile eight times In about half of the total number of urethræ examined pathogenic germs were present The percentage in his series was as high as 62 5 per cent. Of the pathogenic bacteria found, *Staphylococcus pyogenes albus* is the most common The occurrence of the colon bacillus seems very variable It is found frequently when patients are confined to bed In his series it was isolated only three times That these urethral bacteria are actually carried into the bladder by catheterization was shown in eight examinations in which the urethral secretion and the urine obtained by catheterization were compared In 6 cases the bacterial findings were identical, and in the other 2 cases the difference was a slight one

Irrigation of the urethra with boric acid removes a large proportion of the urethral bacteria but when the number is great does not suffice to remove all Taussig claims that the double catheters devised for the purpose of avoiding contamination with the urethral bacteria do not as yet deserve to be generally used Tests made with the instrument of Rosenstein show that its protection is only a partial one It has other objections, so that ordinarily the usual glass catheter is preferable Whenever repeated catheterization becomes necessary, therefore, Taussig advises certain precautions to prevent an infection of the bladder by urethral bacteria Hexamethylenamin or an allied product should be given internally The ordinary glass catheter is introduced part way into the urethra and the urethra irrigated with half a pint of boric acid solution, taking care that the fluid does not enter the bladder The catheter is then passed into the bladder, the urine emptied, and the bladder irrigated with one to two pints more of boric acid solution

24 **Evolution of Cystoscopy**—Peters believes that the cystoscope of the Nitze type is the best instrument for cystoscopy in the male, but that it is unnecessarily elaborate, delicate and expensive for examining the female bladder where the conditions are so much simpler than in the male Kelly's instrument, he thinks, is the ideal one for the female bladder

American Journal of Surgery, New York.

October

29 Subcutaneous Rupture of Abdominal Viscera with Especial Reference to the Intestine and Kidney E Ellot, Jr, New York
30 Surgery of the Tympano-Mastoid Region of the Infant and Young Child S J Kopetzky New York
31 Drainage of the Pelvic Cavity of the Male (in Peritonitis) W Jepson Sioux City Iowa
32 Fracture of the Base of the Fifth Metatarsal Bone by Indirect Violence W M Brickner New York
33 *Roentgen Ray Treatment of Malignant Disease of the Bladder Through a Suprapubic Incision A L Gray Richmond Va
34 Rupture of Both Kidneys with Intraperitoneal Hemorrhage Removal of All of Left Kidney and Part of Right Kidney A. L. Franklin Cumberland, Md

33—See abstract in The Journal, Sept 15, 1906, page 889

Physician and Surgeon, Detroit and Ann Arbor, Mich

September

35 Unsuspected Parasitic Origin of Many Dermatoses W F Breakey Ann Arbor
36 Acute Pneumococcic Cerebrospinal Meningitis of Nasal Origin H A. Freund Ann Arbor
37 Lessons in Longevity J S Caulkins Thornville, Mich
38 Metatarsalgia. W E Blodgett Ann Arbor

Chicago Medical Recorder

October 15

39 Some Forms of Hereditary Cataract C A Wood Chicago
40 Nervous Children A Church Chicago
41 Treatment of Rectal Fistula C J Drueck Chicago
42 Comparative Speed Efficacy of the Intravenous Method of Administering Mercury in Syphilis W F Bernart Chicago
43 Physiologic and Toxicologic Effects of Alcohol J Madden Portland, Oregon
44 The Magnate s Heart W F Waugh Chicago

Journal of the Kansas Medical Society, Lawrence

October

45 Difficulties of an Internist. J H Latta Wichita
46 Acute Epidemic Jaundice H H Ross Sterling
47 Brain Tumor W S Lindsay Topeka
48 Postgraduate Work in Europe. J E Hunt Atchison
49 Medical Treatment of Diseases of the Gall Bladder and Biliary Tracts D I Maggard Wichita

Denver Medical Times

October

50 Management of the Diabetic. E P Hershey Denver
51 Diabetes P D Rothwell Denver
52 Treatment of Diabetes Mellitus. F A Greedy Denver
53 Case of Diabetes Mellitus G B Crews Denver
54 Surgical Treatment of Tuberculosis of the Upper Air Passages and the Ear R Levy Denver
55 Intestinal Tumor N A Johnson Denver
56 Treatment of Puerperal Sepsis G Law Greeley

Utah Medical Journal.

October

57 Methods and Principles of Diagnosis in Stomach Diseases W R Tyndale Salt Lake City
58 Perforating Gastric Ulcer I L Dixon Denver

Journal of the Association of Military Surgeons of the United States, Carlisle, Pa

October

59 Effects of Climatic Extremes on the Health of Battleship Personnel C J Decker U S N
60 The Medical Officer and the Line—A Reminiscence R S Woodson U S A.
61 Penetrating Gunshot Wound of the Abdomen with Nineteen Perforations Operation with Recovery J H Iden U S N

Interstate Medical Journal, St. Louis, Mo
October

62 Importance to the Surgeon of a Study of Anatomic Appearances in the Living M. H Richardson, Boston.
63 Pyuria. E. G Mark, Kansas City, Mo

Indiana Medical Journal, Indianapolis.
October

64 Arthritis Deformans and Chronic Articular Rheumatism, Their Treatment. G D Kahlo, French Lick Springs, Ind.
65 Phenomena of Life.
66 Influence of the Blood Glands on the Process of Metabolism A. Lorand, Carlsbad
67 Priapism from Nasal Reflex, Something for the Rhinologists. A. G Hobbs Atlanta, Ga.

The Medical Fortnightly, St. Louis
October 10

68 Internal and External Urethrotomy Combined. R. Harrison, London.
69 Talks to Recent Graduates A L Benedict, Buffalo
70 Ideal Attitude of the Physician Toward Alcohol as a Medicine, as a Food and as a Beverage. W E. Shaw, Cincinnati.

Louisville Monthly Journal of Medicine and Surgery
October

71 Address of President Before Kentucky State Medical Association G S McDonald Beattyville.
72 Therapeutic Notes W T Marrs, Peoria Heights, Ill.
73 Two Experiences with Acetozone. G P Brady, Chicago
74 Uses of Atropin A. P Banfield, Catlettsburg
75 Report of Cases H H. Grant, Louisville.
76 Fractures of the Upper Portion of the Femur A. D Willmoth, Louisville
77 Uncle Josh on Modern Surgery U V Williams, Frankfort, Ky

Cleveland Medical and Surgical Reporter
October

78 Opium—A Practical Study P W Shedd, New York.
79 Affections of the Seminal Vesicles. J H McVay, Toledo
80 The Tonsil as a Factor in Infectious Diseases. C H Rust, Cleveland
81 Ptomain Poisoning P H. Barton Cleveland.
82 Congenital Abnormalities. J T Schlesselmann, Good Thunder, Minn
83 A Plea for a Broader View of Homeopathy C. S Mack, Laporte, Ind.
84 Optical Defects of the Normal Eye. A. E Ibershoff, Cleveland.

The Post Graduate, New York.
October

85 A Rapid Cure of Epithelioma of Lip C S Cole, New York
86 Report of a Method of Treating Pulmonary Tuberculosis. R H Halsey New York.
87 Russell Treatment of Consumption Applied to Tuberculous Bones and Joints. A. H Cilley New York.
88 Malaria Its Nature and Origin. H T Brooks
89 Needed Reforms in the Medical Laws of the State of New York. F Van Fleet, New York.
90 Myiasis. D W Cairns, New York.

Medicine, Detroit, Mich.
October

91 Suggestions in Special Lines of Research Work for Women V A. Latham Chicago
92 Treatment of Iritis and Serous Iritis by Acetozone. C Wray, London.
93 Enuresis. W F Stucky Louisville, Ky
94 Nargol in Acute Gonorrheal Prostatitis with Involvement of the Vesical Neck. C L. Wheeler Lexington

Northwest Medicine, Seattle, Wash.
October

95 Issues Which Confront the Medical Profession of the State of Washington. G W Libby Spokane Wash.

Journal of the Minnesota State Medical Association and the Northwestern Lancet, Minneapolis.
October 15

96 Epidemiology as Applied to Typhoid Fever in Minnesota. H W Hill Minneapolis.
97 Criminal Abortion J W Andrewes Mankato
98 Objectionable Influence of Proprietary Medicines on the Young Practitioner W S Fullerton St. Paul.
99 Podagra. H L. Staples, Minneapolis

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.
October 6

1 *Medical Women and Public Health Questions. *Professor* Byers
2 Place of Dermatology in the Medical Curriculum N Walker
3 *Influence of Light Hunger in the Production of Psoriasis. J N Hyde.
4 *Evidence of the Existence of an Autotoxic Factor in the Production of Bullous Disease. J C Johnston
5 Demonstration by Lantern Slides J A. Fordyce
6 *Errors in the Treatment of Cutaneous Cancer A R. Robinson.
7 *Evolution of Intraprimary Lesions of Syphilis. R. W Taylor
8 *Case of Pityriasis Rubra. T C Gilchrist.
9 Case of Dermatitis Vegetans W T Corlett.
10 Wrong and Right Use of Milk in Certain Diseases of the Skin. L. D Bulkley
11 *Observations on the Etiology and Treatment of Eczema. G Chambers.
12 *The Blood in Relation to Skin Diseases. T Houston and J* C. Rankin.
13 International Coöperation in the Inspection of Emigrants and Immigrants. P H Bryce.
14 State Control of Health. J C Drennan
15 *Legislation Regarding Food Preservatives A. McGill
16 *National Supervision and Standardization of Food. H L. E. Johnson

1 Medical Women and Public-Health Question—Byers points out a few of the many public health questions in which medical women may find ample scope for work, such as the medical inspection and supervision of school children, the reduction of infant mortality, the establishment of infant milk depots

3 Light-Hunger in Production of Psoriasis.—Hyde emphasizes conclusions previously set forth that psoriasis is an expression in the skin of the human body of its resentment against long continued exclusion of light from the surface. Psoriasis, he says, never affects the lower animals for the reason that the integument of such animals is very rarely screened from the light by artificial covering If, he continues, psoriasis in man be an expression of resentment on the part of the skin against the partial or total exclusion of light from its artificially covered surfaces, it is clear that the number of persons whose skin is thus abnormally sensitive is relatively small. If psoriasis be a result of light hunger in the skin of certain abnormally sensitive subjects, because of the greater or less degree of exclusion of light resulting from artificial covering of the body, the disorder should be most prevalent and most severe at those seasons of the year and in those countries in which sunlight is least abundant. The localization of the disease in the integument should be largely determined in the regions of such exclusion. The effective treatment would be by illumination of the regions chiefly involved

4 Autotoxic Factor in Bullous Disease—In view of the clinical evidence of systemic poisoning, which is known to be non bacterial, the occurrence of eosinophilia and indicanuria, and the improved results of elimination treatment, Johnston thinks it hard to escape the conclusion that bullous disease is an autointoxication, and, further, that that autointoxication has its origin in the failure of the proteid metabolism It is safe to assume, he says, that in the course of the process there is elaborated, possibly among many other toxic bodies, one with an action on vessel walls as specific as that of snake venom or the nettle It operates, probably, everywhere in the body as well as in the papillary layer of the skin. The ultimate conclusion is inevitable that the skin lesions are local expressions of a general disturbance, and that the bullous group is only a striking variation from the general run of the poisonings which have their origin in perversion of the body processes

6 Treatment of Cutaneous Cancer—Robinson believes that it is impossible to lay down any special treatment of universal application in cases of cutaneous cancer The treatment in each case should be determined by the individual characteristics presented by the growth, the nature, extent, depth and site of the lesion With regard to general constitutional treatment he has found so far no evidence of any satisfactory result from internal medication, though he considers that very possibly a future opening up great possibilities lies in this direction, particularly by influencing the general economy by the secretions of ductless glands He is convinced, however, that the imbibition of alcohol by the subjects of cutaneous cancer seriously hinders the good effects of treatment The treatment, of whatever kind, should be directed to complete and thorough removal of the growth and with the least possible deformity The mode of removal depends entirely on the character and site of the lesion—for example, flat growths should not be excised, but caustics and Roentgen rays employed. The Roentgen rays, in his opinion, however, have been far too widely employed, almost justifying their designation as race suicide machines, they should be restricted to certain specific forms, and their use preceded by agents capable of lowering the vulnerability of the parts

7 **Interprimary Lesions of Syphilis**—Careful study has convinced Taylor that the syphilitic infective process is from the start a very rapid one, and that the disease is systemic from the date of its inception The poison strikes directly for the blood vessels, and, causing there its peculiar changes, runs along them with astonishing rapidity and diffuses itself systematically throughout the body The occurrence of successive chancres and of interprimary precocious syphilides, therefore, does not show that the parts invaded are the seat of an immunity due to their not yet being syphilitically infected, but, on the contrary, that these parts are from the onset actively syphilitic, and that the tissues react moderately well to the repeated early specific infection either as a result of experimentation or in • clinical practice Traumatism undoubtedly is largely the cause of all these lesions The following conclusions were drawn

1 By the autoinoculation of the secretion of the hard chancre in the primary period of a proliferative lesion resembling a secondary papule rather than a true chancre is produced
2 In many cases a syphilitic is infected several times following a first infection and a succession of primary lesions is produced
3 In some cases infection of one or more portions of the body, usually extragenital is produced by a second syphilitic individual or doner a short time after the development of the initial lesion
4 Infection of a patient by a second syphilitic a short time after his or her virgin or primary infection occurs in exceptional instances.
5 Successive syphilitic lesions run a regular course, and do not usually portend malignancy
6 The view that syphilitic infection is for a time local and that there is an immunity to further early specific neoplasms in contiguous parts, is based on a false conception of the course of syphilitic infection. The poison of syphilis acts promptly early and progressively and is a potential factor until its culmination is achieved in the developed systemic secondary stage.
7 The claimed immunization in primary syphilis is a chimera and founded on false pathology
8 Though in general syphilis pursues a tolerably orderly course and its general exanthematic manifestations appear at the classical secondary climax sparse precocious exanthemata may not infrequently be observed.

8 **Pityriasis Rubra**—Gilchrist reports a case of this kind occurring in a woman aged 36, which was followed by gangrene of the left foot and the distal half of the right hand The gangrenous process was noted from the very beginning and could not be prevented or stopped in its course The affected parts were amputated.

11 **Treatment of Eczema.**—Chambers has obtained very gratifying results from the use of normal saline solution in the treatment of acute eczema In making the application cheese cloth—8 to 10 thickness—is moistened with the solution and applied to the patches To prevent drying the moist dressing is covered with oiled silk The dressing should be changed twice a day In cases in which the eczema is impetiginous he adds boric acid in sufficient quantity to the normal saline solution to make about 1 in 60 At each change of dressing it is well to wash the affected parts with the solution As soon as the skin, by its color, smoothness, absence of crusts, etc, shows diminished inflammation and improved keratinization Chambers discontinues the dressing and applies a soothing ointment, such as Lassar's paste. Subsequently a mildly stimulating ointment may be required

15 **Legislation Regarding Food Preservatives**—McGill is in favor of specific permission in the legalization of food preservatives, that is, the law must name the substances which can be used, or it must be specifically prohibitive The quantity that can be used also should be stated

16 **National Supervision and Standardization of Food.**—Speaking of the recent legislation in the United States providing for pure food and meat inspection Johnson says that from the politico industrial point of view this legislation is excellent so far as it goes From a medico hygienic standpoint, however, it is not entirely efficient or satisfactory, as it tends to conserve the financial interests of the producer and to jeopardize the health of the consumer, by delaying the operation of the food bill, and by omitting the date of slaughter, production and inspection from the government certificate or label, thereby placing an immense quantity of meat and meat products, prepared under presumably careless and objectionable methods, now in cold storage or warehouse, on an equality with, and indistinguishable from, recent products prepared under careful government supervision

The Lancet, London.

October 6

17 *Scientific Investigation of the Psychical Faculties or Processes in the Higher Animals. I P Pawlow
18 The General Medical Council, Its Powers and Its Work. D MacAlister
19 The Theory and Practice of Medical Education N H Alcock.
20 *Injection of Antitoxin in Diphtheria by the Intravenous Method A O Bisson.
21 Purin Free Diets. W A. Potts

17 **Psychical Faculties in Higher Animals**—The point considered in this lecture by Pawlow are psychologic definitions, reflex stimulation of the salivary glands, conditioned and unconditioned reflex action, methods of eliciting conditioned reflex action, various modifications and combinations of conditioned stimuli

20 **Intravenous Injection of Diphtheria Antitoxin.**—Bisson records 200 cases of diphtheria treated by the intravenous injections There were 90 mild pharyngeal cases and all of the patients recovered Out of these 67 had the whole of the antitoxin intravenously, the others had it partly subcutaneously and partly intravenously The total dosage given varied between 2,000 and 20,000 units There were 30 severe pharyngeal cases, with 3 deaths due to paralysis The total doses of antitoxin varied between 20 000 and 70,000 units In 13 cases the antitoxin was all given intravenously (one of these patients died), in the others partly in that way and partly subcutaneously Of 31 very severe pharyngeal cases 16 resulted fatally, death being due to cardiac paralysis The total doses of antitoxin were between 20,000 and 110,000 units In 4 cases all the serum was injected intravenously, and 2 resulted fatally In 3 mild laryngeal cases the patients recovered, the antitoxin (8 000 units) being given intravenously Ten severe laryngeal cases, in 2 of which the antitoxin was given entirely intravenously, recovered Intubation was performed in all these cases There were 5 very severe laryngeal cases, with one death from bronchopneumonia One had all the serum intravenously Three out of 4 mild pharyngolaryngeal cases had all the serum intravenously All the patients recovered In only 2 out of 8 severe cases of this type was the serum given intravenously There were 2 deaths in this group From October, 1904, to April, 1906 altogether 660 cases of diphtheria were treated in the Plaistow Hospital, with 92 deaths Comparing this death rate with that of the cases treated by the intravenous method, it is 13 94 per cent in the former and 16 5 per cent in the latter This, Bisson says, is partly due to the fact that all the very severe cases were chosen for the intravenous treatment Out of the 200 cases there were 9 tracheotomies, with 3 deaths—a mortality of 33 per cent.—and there were 18 intubations, with 2 deaths—a mortality of 10 10 per cent

Indian Medical Gazette, Calcutta

September

22 Cataract in the Capsule H Smith
23 Some Observations on the Breeding Ground of the Common House Fly and a Description of a Species of Moth Fly G D Franklin
24 An Account of Plague in Bengal (To be continued) W W Clemesha.
25 Extraction of Cataract in the Capsule Versus the Ordinary or Capsule-Laceration Method H Gidney

The Clinical Journal, London

September 26

26 *Group of Cases Illustrating the Surgery of the Biliary Apparatus. A. E Barker
27 Pyloric Obstruction in Infants. A. Garrod.
28 Radiotherapy in Skin Disease J Belot.

October 6

29 Forms of Surgical Tuberculosis in Children R Johnson
30 Tracheotomy J Berry
31 Anemia in Children H Thursfield

26 **Surgery of Biliary Apparatus**—Barker reports the following cases 1 Gallstone impacted in the common duct, cholecystectomy, common duct explored from duodenum, stone removed, recovery 2 Cholelithiasis, cholecystectomy, recovery 3 Suppurative cholelithiasis, *B coli communis* ab-

scess of the liver under gall bladder and reaching to portal fissure, abscess opened and stitched to abdominal wall, gall bladder opened separately, mucopus evacuated, and several stones drained separately, death occurred a month later 4 Suppurative cholecystitis and gallstones, cholecystostomy, drainage, recovery 5 Cholelithiasis, cholecystitis, cholecystectomy without opening gall bladder, recovery 6 Carcinoma, nodule involving the common duct, extreme jaundice and suffering, cholecystenterostomy, complete relief 7 Cholelithiasis with many adhesions, cholecystectomy, recovery 8 Suppurative cholelithiasis, cholecystectomy after slitting up common duct, recovery 9 Symptoms resembling severe biliary colic, exploration, hard mass in second part of duodenum with surrounding adhesions, duodenal ulcer, gastroenterostomy, recovery 10 Symptoms obscure, rather pointing to cholelithiasis, hard lump and adhesions in second part of duodenum, probably chronic ulcer, gastroenterostomy, recovery 11 Large stone in common duct, removed by choledochotomy, gall bladder excised, subphrenic abscess opened between ninth and tenth ribs, recovery 12 Gangrenous cholelithiasis, large stone impacted in cystic duct, stone removed, gall bladder drained, recovery 13 Suppurative cholelithiasis, large stone in cystic duct, removed, gall bladder stitched up, wound drained, recovery 14 Cholelithiasis, cholangitis, cholecystectomy and drainage of common duct, death 15 Cholelithiasis, cholecystectomy after freeing adhesions, recovery 16 Cholelithiasis and cholangitis, cholecystectomy and opening of the common duct, which was drained with a rubber tube, recovery

The Australasian Medical Gazette, Sydney

August 20

32 Epidemiology of Plague. J A Thompson
33 Aneurism of the Ascending Aorta, with Slow Extravasation of Blood into the Pericardial Sac. J C Verco
34 The Leucocytosis of Hydatid Disease. D A Welsh and J E V Barling
35 Administration of Morphin in Cases of Abdominal Section C. S Hawkes.
36 Case of Rupture of the Uterus. H Carr
37 Case of Bilharzia Hematobia H S Stacy
38 Case of Cerebrospinal Meningitis G Cuscaden
39 Five Cases of Ankylostomiasis F Hamilton Kenny

Intercolonial Medical Journal of Australasia, Melbourne.

August 20

40 Local Anesthesia. J Ramsay
41 Cocain Anesthesia by Schleich's Method W Moore.
42 Spinal Analgesia as a Special Form of Anesthesia B T Zwar
43 Case of Cerebellar Hemorrhage A. V M. Anderson
44 *Access to the Knee Joint by Anterior Longitudinal Incision with Section of the Patella. R. H Russell
45 Arrest of Respiration After Operation on the Skull W A. Wood and R R Stawell

44 **Exposure of Knee-Joint by Longitudinal Incision**—The operation described by Russell is said to be free from the drawbacks attending transverse section of the patella, and gives incomparably better access to the interior recesses of the joint It is performed as follows, the knee being moderately flexed 1 Make an incision starting two inches above the upper edge of the patella, carried downward to the tubercle of the tibia, passing over the middle of the patella and ligamentum patellæ 2 Saw through the patella in the line of the incision opening the joint, incise the anterior joint structures upward to the upper limit of the suprapatellar pouch, and downward, splitting the ligamentum patellæ throughout to the tubercle of the tibia 3 Fully flex the knee, and with blunt hooks applied to the two halves of the patella, pull them apart until they slide over the condyles of the femur A few snips with scissors will release the synovial attachments at the lower part of the joint It will now be found that the two halves of the patella will naturally tend to evert, so that they will lie on the sides of the limb, each with its articular surface outward, in fact, the whole of the anterior and lateral joint surfaces will be turned inside out The operation having been completed, the limb is straightened, and the two halves of the patella return naturally to their normal position in the joint There need be no wiring of the patella The operation is finished by suturing the capsule of the joint from the patella upward, while from the patella downward, one or two sutures immediately below the bone are all that is required Russell performed this operation on two occasions, both were for the performance of arthrodesis The result in both cases was perfect

Semaine Médicale, Paris

46 (XXVI No 37) *Le rôle des matières minérales dans l'organisme. A Charrin
47 (No 38) *L'autoinfection puerpérale au point de vue bactériologique. R De Bovis
48 (No 39) *Leucémie et radiothérapie C. Aubertin
49 Le calcul des probabilités appliqué au pronostic. M Landolfi

46 **The Part Played by Mineral Substances in the Physiology of the Organism**—Charrin reviews the recently acquired knowledge in regard to the importance of the rôle of mineral substances in physiology, anatomy, chemistry and pathology, showing how the cell is liable to be influenced by them from innumerable points of view At present the gaps in our technic leave many of their attributes still a problem, but even with the study of osmosis alone we have learned the secrets of a number of the organic mechanisms

47 **Puerperal Autoinfection from the Bacteriologic Standpoint**—De Bovis devotes several pages to a critical review of the contradictory literature on this subject He remarks that it is evident that the obstetrician ought to sterilize the field just like the surgeon, but asks Can he do it? He doubts if this is possible, even in the best regulated clinics If the field were sterilized at the commencement of labor it would be impossible to keep it sterile during the long hours of labor with the woman moving about Theoretically the vulva should be aseptic, but this can not be accomplished absolutely in practice After childbirth the normal defensive action of the vagina is temporarily lost, to a greater or less degree, and germs may spontaneously work their way upward. The uterus may be sterile during the first day or so after delivery, but all investigators agree that by the fourth day from 33 to 85 per cent of the women have pathogenic germs in the uterus, and their researches did not include anaërobic tests, which would probably bring the percentage still higher The germs were found most numerous in the febrile cases, but they were encountered even more often in the non febrile ones De Bovis concludes that the possibility of puerperal autoinfection seems to be established beyond question, but that the obstetrician has it in his power to reduce materially the number of microbes He adds that the microbes do not proliferate unless they find a pre-existing infection of the genital tract or relics of inflammation or structural conditions favoring the mechanical retention of morbid products On the other hand, it is extremely doubtful, he continues, whether infection can develop in an absolutely healthy and well formed woman without the intervention of some foreign factor Puerperal autoinfection is thus seen to obey the same laws as general pathology—the presence of infectious germs on the one hand and a predisposed organ on the other With insufficiently sterilized external genitals, the obstetrician may infect the woman with his finger or instrument, or rather inoculate her In introducing into the vagina or uterus microbian species from without—which are the most virulent—he doubles the dose, both quantitatively and qualitatively The patient who might have been able to conquer her own microbes succumbs in the struggle against the imported ones

48 **Roentgen Treatment of Leukemia**—Aubertin's conclusions in regard to Roentgen treatment of leukemia are that it is liable to prove a very effectual symptomatic measure against the disease, but more than this must not be expected from it The patient should be kept under supervision, and as soon as the blood picture even approximates normal he would suspend the exposures He would resume them again whenever the blood picture shows that further symptomatic treatment is needed The exposures, he thinks, should be at considerable intervals, and be regularly and uniformly distributed over the entire blood forming apparatus, lengthening the intervals as the blood picture shows signs of improvement, and never pushing the treatment to the stage of reduction of the colorless corpuscles below normal numbers It is a purely symptomatic treatment, but of such possible efficacy that every leukemic patient should be given the benefit of it The acute form of the disease is the least tractable

Berliner klinische Wochenschrift

50 (XLIII No 34) Ueber Syphilome innerer Organe Neonatorum und ihre Beziehungen zur Spirochæte pallida. V Babes and Th. Mironescu (Bucharest)
51 Ueber Metastasen Bildung bei transplantierten Sarkomen der Maus (of the mouse) M. Haaland (Christiania)
52 Fälle von Enteroptose und Cardioptose mit Rückkehr zur Norm (with return to normal) M Einhorn (New York)
53 Zur Bewertung des Antistreptokokken Serums für die Behandlung des Puerperalfiebers auf Grund statistischer Untersuchungen Busalla (Hannover)
54 Changes in Organs Under Influence of Suprarenal Extract.—Weitere Untersuchungen ueber die von den Nebennieren Extrakten bewirkten Veränderungen der Blutgefässe und anderer Organe L. d Amato (Naples)
55 (No 35) Geburtsstörung nach Ventrifixation des Uterus (interference with childbirth) Hocheisen
56 Miliartuberkulose und Skorbut. Géronne
57 *Action of Quinin on Hemoglobin and Test for Carbon Oxid in the Blood.—Ueber die Wirkung des Chinins auf den Blutfarbstoff nebst Mitteilung einer einfachen Methode zum Nachweis von Kohlenoxyd im Blut. S v Horoszkiewicz and H Marx.
58 Ueber die kombinierte Resorcin und Röntgen Behandlung des Lupus vulgaris nach Ehrmann S Reines
59 Zur Statistik und Pathogenese des Quinquaudschen Zeichens (crepitation of joint surfaces) E Lauschner (Concluded.)
60 Die modernen Grundlagen der Balneologie L. Mohr
61 (No 36) Experimental Absorption of Dead Tubercle Bacilli.—Resorption toter Tuberkel Bacillen A. Marmorek
62 Examination of Blood in Nervous Affections—Blutuntersuchungen an Nervenkranken R Bing
63 Erkrankung der Caruncula sublingualis. E Davidsohn
64 Zur Serumbehandlung des Heufiebers (of hay fever) W Weichardt
65 Flour in Infant Feeding—Mehlkinder A. Keller
66 Are Modern Methods of Diagnosing Syphilis Scientifically Accurate?—Genügt die moderne Diagnose syphilitischer Erkrankung wissenschaftlichen Forderungen? O Rosenbach

57 **Quinin Test of Blood Spots**—Marx has recently published an announcement that quinin alters hemoglobin in a peculiar manner Blood submitted to the action of a 15 per cent solution of quinin for a few days changes color and the spectroscope shows, instead of the original oxyhemoglobin lines, a characteristic spectrum between the Fraunhofer C and D lines, corresponding to a wave length of from 596 to 628 These facts are important from a medicolegal point of view, as blood spots on linen, dating from 1901, placed in a hot, 15 per cent solution of quinin, gave the characteristic quinin blood spectrum distinctly By heating a mixture of blood and a 10 per cent solution of quinin, in the proportion of 2 to 4, the red blood changes rapidly to brown and the spectrum becomes visible at once A characteristic reaction is also obtained with blood impregnated with carbonic oxid The blood is mixed with an 8 per cent solution of quinin hydrochlorate in the proportion of 2 c.c blood to 4 c.c. of the quinin solution The mixture is then heated slowly and evenly over a Bunsen burner until it boils up once After cooling enough to handle the test tube, two or three drops of freshly prepared ammonium sulphate are added, and the whole is briskly shaken at once If the blood contains carbonic oxid, it turns a brilliant carmine red, while normal blood becomes a dirty greenish brown These tints are durable for weeks

Centralblatt f Chirurgie, Leipsic

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67 (XXXIII No 34) *Median Incision for Opening the Esophagus.—Mediane Schnittführung zur Eröffnung der Speiseröhre H Hans.
68 (No 35) *Silver Rubber Silk Instead of Silver Wire for Buried Sutures—Silberkautschukseide an Stelle des Silberdrahtes zur versenkten Naht. O Witzel Id Its Production Wederhake (Bonn)
69 Ueber retrograde Darm Inkarceration. E. Haim Also in No 39
70 (No 36) Pharyngotomia suprahyoidea. L. Grünwald
71 *Die nachträgliche Entfernung eingewachsener oder eingeklemmter Gazestreifen (removal of gauze that has grown in or is otherwise held) C. Lauenstein.
72 (No 37) Dorsale Fixation des Armes bei Schlüsselbeinbruch (in case of fracture of the clavicle) C. Bayer
73 Oiled Silk to Protect the Intestine in Tamponing the Peritoneum—Protektivsilk als Deckmittel für den Darm bei peritonealer Tamponade. Id.
74 Erhaltung des Weichteilnasengerüstes bei Oberkiefer Resektion (retention of support for soft parts of nose in resection of upper jaw) C. Israel
75 (No 38) *Zur Technik der Trepanation. M Borchardt.
76 (No 39) *Zwei Modifikationen der Matrazennaht (mattress suture) A. Hofmann

67 **Median Incision of Esophagus.**—Hans removed a deep impacted coin from the esophagus of a small child by a median incision below the trachea, over a Wildunger bougie filled with lead introduced through the mouth He considers a median incision for a foreign body low down superior to the usual technic

68 **Silver Rubber-Silk Instead of Silver Wire for Buried Sutures**—Wederhake describes the manner of preparing a suture material for buried sutures, which Witzel has been extensively using with constantly increasing satisfaction. It does not absorb watery fluids, is very strong, and is absolutely sterilized in the making, while the technic of its production is simple and inexpensive Every physician can make his own supply The foundation is silk, which is wound on thick Kocher drains or glass plates, and the fat removed by soaking for 12 hours each in ether and then in absolute alcohol The silk is then placed in a 10 per cent solution of peroxid of hydrogen for 20 minutes It is then removed to a silver solution made by adding drops of normal caustic soda solution to 30 c.c. of a 1 per cent aqueous solution of nitrate of silver until the blackish brown sediment that forms is not increased by the addition of more drops of the soda solution Usually about 10 drops of the soda solution are required To the blackish brownish fluid resulting, water of ammonia is added, drop by drop, constantly shaking, until the precipitate produced by the silver nitrate is completely dissolved, and the fluid becomes clear and transparent The silk is left in this silver solution for one hour By the end of this time the silk has become so impregnated with pure molecular silver that it turns a deep black, with a silvery sheen It must be examined to see that this impregnation proceeds evenly Transverse sections of the silk should appear black with no white specks The silver silk is then dried in the incubator at 100 C, and then transferred to pure chloroform for two hours After this the silk is placed in a chloroform solution of rubber for 12 hours The rubber solution is made by dissolving 8 gm black rubber (such as can be obtained from a dental depot) in 50 c.c of chloroform The silk is then rinsed in chloroform, dried, and then boiled for 10 minutes in a 1 per 1,000 solution of corrosive sublimate, in which it is set aside to keep ready for use The same technic is applicable also to thread, hemp, etc A simple silver silk, without the rubber, is made by placing the silk in a 10 per cent solution of peroxid of hydrogen for one hour, and then transferring to the silver solution for one or two hours, according to the size of the silk thread After this it is boiled for 10 minutes in 1 per 1 000 solution of corrosive sublimate, in which it is kept ready for use Witzel regards this silver rubber silk as the solution of a pressing problem, the suture material thus prepared having all the good qualities of silver wire and of silk with none of their drawbacks

71 **Removal of Adherent Strips of Gauze**—Lauenstein takes hold of the end of the strip of gauze with forceps and, instead of pulling it out, twists it continually on its axis His experience has been that this loosens up small regions of adhesions at a time, and the final removal of the gauze is then an easy matter, even after a Mikulicz tamponade

75 **Technic of Trephining**—Borchardt gives illustrations of some instruments he has devised which he thinks are an improvement over those in ordinary use

76 **Modifications of Mattress Suture**—Hofmann illustrates his technic The first view shows the usual mattress suture The thread is then brought back and under the loop on the other side, and the ends are then tied This materially reduces the traction on the edges of the wound The two loops of the mattress suture thus form an X instead of lying straight and parallel as usual The other modification is that the stitches, instead of passing below the edges of the wound, are brought out again just before the edges are reached, and pass above them This also relieves the traction on the parts

Centralblatt f Gynäkologie, Leipsic.

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77 (XXX No 34) *Nervous Affections in the Puerperium—Zur Kasuistik der nervösen Erkrankungen im Wochenbett H Sutter
78 Perniziöse Anämie im Puerperium kompliziert mit septischer Infektion H Meyer Rüegg
79 (No 35) *Catalytic Action of Colloid Silver and Permanganate to Enhance Action of Peroxid of Hydrogen—Ueber Spülungen mit Wasserstoffsuperoxid unter Einwirkung von Argentum colloidale oder von Permanganat H Füth (Zweifel s clinic, Leipsic)
80 (No 37) Eklampsie ohne Krämpfe (without convulsions) G Binder

81 Simplification of Technic of Obstetric Measurements—Zur 'Vereinfachung' meiner Mess-Methode der Conjugata obstetrica. L. v Bylicki
82 (No 38) Zur Indikation und Technik der Hebotomie. L Seeligmann.
83 Zur Atonie des nicht schwangeren Uterus (of non pregnant uterus) J Meyer

77 Nervous Affections in Puerperium.—Sutter describes a case of psychoneurosis befalling a young woman in the second week after childbirth It was the only case of unmistakable hysteria discovered among 300 gynecologic and obstetric patients whose nervous condition had been specially investigated at his clinic. In this case the birth was illegitimate and the woman was facing court proceedings when she suddenly developed total paralysis, with attacks almost epileptiform in character, but all passing away in the course of two months

79 To Enhance the Action of Peroxid of Hydrogen by Catalysis—Filth calls attention to the way in which colloidal silver hastens the decomposition of peroxid of hydrogen without being altered itself The combined action of the two is extraordinarily efficient in cleansing and disinfecting A putrid endometritis rinsed with even a weak concentration of the two loses its fetid odor immediately The colloidal silver acts as a catalyzer He injected the two substances independently, through separate catheters, in such a way that they blended as they emerged. As colloidal silver is comparatively expensive, he experimented with other drugs and found that all the peroxids have a promoting effect on the decomposition of each other Potassium permanganate and peroxid of hydrogen have a chemical reciprocal action on each other, and both yield oxygen The addition of a little acid causes still more energetic decomposition on the part of the permanganate, and results in the production of a colorless salt of the acid used. He commends this combination as a remarkably effectual exaggeration of the familiar action of peroxid of hydrogen, magnifying its action immeasurably and accelerating it The most practical form in which to apply the combination is to make two solutions No 1 is made by adding 35 c.c. of 3 per cent. H_2O_2 to a liter of water, No 2 by adding 2 gm of potassium permanganate and 5 c.c. of diluted (30 per cent) acetic acid to one liter water Decomposition commences as soon as the two solutions come together In the combination $5H_2O_2$ plus $2KMnO_4$ makes $5O$, 1 gm H_2O_2 gives thus 0 94 gm O, about 700 c.c. O_2 When equal amounts of the two solutions are blending properly the escaping fluid is colorless, while if one or the other of the solutions preponderates, the outflow will be colored. Consequently, the receptacles holding the two solutions must be at the same height and each be connected with a catheter that allows two currents—an ordinary two way catheter, such as is used for rinsing the bladder—will be found convenient for treating inoperable uterine cancer

Zeitschrift f klinische Medizin, Berlin.

Last indexed page 756

84 (LIX Nos. 2-4 Bäumler Festschrift.) *Orthoperkussion Orthodiagraphie und relative Herzdämpfung (heart dulness) G Treupel and W Engels
85 *Ueber das Verhalten der weiblichen Geschlechtsorgane bei Hysterie Herzleiden und Chlorose (female sexual organs) P Diepgen and M Schröder
86 *Beiträge zur Pathogenese der paroxysmalen Tachykardie. H Reinhold.
87 *Zur Kasuistik der Rückenmarks-Tumoren (of spinal cord) Schüle
88 Ueber einen Fall von Typhus-abdominalis mit hyperpyretischen Temperaturen K. Mollweide
89 *Heart Block—Zur Kenntnis des Herzblocks beim Menschen (Adams Stokesscher Symptomenkomplex) E Roos.
90 Physiologic Importance of Rhodan Compounds.—Weitere Untersuchungen ueber die Bedeutung der Rhodan Verbindungen im Tierkörper A. Edinger and P Clemens
91 Metabolism in Case of Exophthalmic Goiter—Zum Stoffwechsel bei Morbus Basedowii. P Clemens
92 Ueber 2 Fälle von Pentosurie nebst Untersuchungen ueber ihr Verhalten bei verschiedenen Ernährungsformen F Blum
93 Ueber das Auftreten des Babinskischen Reflexes nach Skopolamin Injektionen R Link.
94 *Zur Diagnose von Knochenmarkstumoren aus dem Blutbefunde (blood findings with tumors of bone marrow) K. Schleip
95 Klinische Untersuchungen der Viskosität des menschlichen Blutes (human blood) Determann
96 Ueber die Giftwirkung einiger Stämme von Aspergillus fumigatus und Penicillium glaucum nebst einigen Bemerkungen ueber Pellagra (toxic action) M Otto
97 *Body Weight and Milk Diet in Scarlet Fever—Körpergewichte und Milchdiät bei scharlachkranken Säuglingen. H Risel
98 Studien ueber Urobilinurie und Ikterus Ein Beitrag zur normalen und pathologischen Physiologie der Leber (liver) W Hildebrandt.
99 Das Verhalten der Leukozyten bei Röteln Id
100 Ein Fall von nicht parasitärer Chylurie mit Sektionsbefund. F Port.
101 Ueber die Bedeutung des Bacterium coli für menschliche Pathologie mit besonderer Berücksichtigung der Infektion der Harnwege und der septischen Erkrankungen. G Liebermeister

84 Orthopercussion and the Relative Heart Dullness.—Treupel and Engels affirm anew that orthopercussion surpasses all other known methods of determining the outlines of the heart by percussion, and gives important information when all other means fail. They add a number of tracings of the findings in various cases, with discussions of several technical points The orthopercussion findings were traced first and then the findings with orthodiagraphy

85 Menstruation in Case of Hysteria, Chlorosis and Heart Affections.—Diepgen and Schroeder examined 75 hysterics, 116 women with heart affections, and 141 with chlorosis, in respect to menstruation They found that the menses commenced unusually late in women who developed hysteria or chlorosis afterward Menstruation was also inclined to be tardy and weak, an indication of defective physical development, to which was also due the predisposition to hysteria or chlorosis later Hysteria seems to be a frequent cause for dysmenorrhea, but gynecologic affections accompanying hysteria seem to be merely an inciting cause, like the trauma in traumatic hysteria In heart disease the general enfeeblement of the organism is responsible, as a rule, for the anomalies in menstruation observed The findings all confirm the assumption that chlorosis is the result of a defective physical development

86 Paroxysmal Tachycardia.—In the first of the 2 cases described, the tachycardia was due to a syphilitic basilar meningitis, in the second to a tumor in the left half of the brain. The findings in the heart were entirely negative in each case. Reinhold reviews the recent literature on the relations between paroxysmal tachycardia and affections of the nervous system.

87 Tumor of Spinal Cord.—Schüle's patient was a lad of 14 who presented symptoms diagnosed at first as sciatica Pains and weakness in the legs appeared later, accompanied by abnormal desires to urinate The kneejerk and tendon reflex could not be elicited, but the cremasteric reflex was pronounced Nothing abnormal could be discovered in the spine. A sarcoma was diagnosed, in the vicinity of the twelfth dorsal vertebra, and it was removed. The benefit was only transient, as the malignant growth soon recurred.

89 Study of Heart Block.—Roos describes in detail a case of the Adams Stokes' symptom complex observed in a man of 72 It was a typical example of what Charcot called permanent slow pulse with syncopal, apoplectiform and epileptiform attacks The syndrome becomes much more comprehensible when underlying heart block is assumed Some affection of the bundle of His causes the trouble, while the rest of the heart is behaving normally This assumption is rendered still more plausible by the fact that the trouble is observed in arteriosclerotics and in men oftener than in women But even in the young and in persons not affected with arteriosclerosis, the bundle of His might become injured from some cause, possibly a myocarditic or syphilitic lesion Stengel found in one case a patch of sclerosis in the septum when the rest of the myocardium was apparently sound Heart block must be included *among the severer affections of the heart, although* patients may long survive (See editorial in The Journal, Sept 8, 1906 page 779)

94 Diagnosis of Tumors in Bone Marrow from the Blood Findings.—The blood findings in the 3 cases described differed in several respects from the findings known in any other affection In each case there was metastasis in the bone marrow of a latent sarcoma or carcinoma in the stomach or intestines The cancerous degeneration of the bone marrow was revealed by the presence of abnormal cell forms different from those observed in leukemia and severe anemia Owing to the tendency of sarcomatous tumors to involve the blood vessels, the finding of tumor cells in the peripheral blood is not surprising The problem will be to stain these cells in such a way as to differentiate them from the manifold types of physiologic marrow cells or lymphocytes These abnormal cells formed nearly 9 per cent of the leucocytes in the first case in which the cancerous degeneration of the bone marrow had caused very slight symptoms during life, and the primary tumor in the stomach had remained entirely latent Neuralgia had been observed at various points, but there was no tenderness of these points on pressure or tapping In the second case there were no abnormal cells, but typical myelocytes were numerous as also the preliminary forms of neutrophile leucocytes and the red corpuscles showed great differences in size and outline, testifying to severe injury of the bone marrow The latent primary focus was a carcinoma in the appendix, but points in the sternum and sacrum were painful when tapped, and the diagnosis of malignant metastasis in the bones was confirmed by autopsy The characteristic changes in the blood findings in these cases confirm the importance of the blood for the diagnosis of malignant disease even in an early stage In the third case these abnormal cells formed 14 per cent of the total leucocytes and the red corpuscles showed great differences in size and shape The abnormal cells were from two to four times as large as a red corpuscle, the enlargement being due principally to the size of the nucleus The smaller ones had a round or notched nucleus, somewhat poor in chromatin, with a reticular loose structure In some the chromatin was irregularly arranged so that parts seemed quite light The nucleus was surrounded with a narrow, sometimes barely visible protoplasm, with faintly basic staining properties The nucleus showed very little resisting power, and looked like a soft mass spreading out between the neighboring erythrocytes in several directions, without any perceptible lesion in the nucleus envelope The larger forms had more protoplasm, and the nucleus was lobulated or shaped like an S, or was divided into two or three nuclei. The protoplasm did not show any granulation.

Zeitschrift f Krebsforschung, Berlin.

Last indexed page 468.

102 (IV No 2.) Transplantables Rund Zellen-Sarkom des Hundes (of the dog) A Sticker
103 *Zur Statistik und Kasuistik metastatischer Tumoren bes der Carcinom Metastasen im Zentral Nerven-System K. Krasting
104 Malakoplakie der Harnblase (of bladder) K. Hart.
105 Die mikroskopische Struktur der Magen und Darm-Carcinome und ihr Verhältnis zum makroskopischen Bau. C. U Ariëns Kappers and P H van Roojen.
106 Die idioplastische Verbildung der Krebszelle und ihre Ursache, mit bes Berücksichtigung des proteolytischen Enzyms (transformation of cancer cells) J Rülf
107 Die Schüllerschen Körperchen als die angeblichen Erreger der malignen Geschwülste (Schüller's bodies in cancers) H Deetjen.

103 Cancer Metastasis in the Central Nervous System.—Krasting's article is based on 12,730 autopsies at Basle, from 1871 to 1905 Malignant tumors were found in 1,238 cadavers, that is, in 9 72 per cent of the total material Only 160 were sarcomata, the others were all carcinomata The number of cases of carcinoma has increased regularly each year, from 1, 3, 19 and 10, in the first four years, to 48, 58, 65 and 57 in the last four years Sarcoma has kept at about the same annual average of from 2 to 6 The findings as to location, age, etc, are tabulated separately The majority of carcinomata occurred between the ages of 40 and 70 but sarcoma was observed about equally at all ages Tumors in the brain were found in 144 cadavers, primary in 63 19 per cent. Of the 53 metastatic tumors in the brain it was a sarcoma in 14 and a carcinoma in 39 Primary carcinoma was not found in the brain in any instance, but secondary carcinomatous tumors in the brain were observed in about 18 per cent of all cases The melanotic sarcoma is the most malignant in respect to sarcomatous metastasis in the brain, the comparatively youthful are the most affected, and males more than females Metastasis in the brain was observed in 4 77 per cent. of the carcinoma cases, and males predominated here also Metastasis in the brain was observed most frequently with malignant chorio epithelioma and next, in turn, with carcinoma of the suprarenals, pharynx jaw, prostate, breast, bronchus, lungs, thyroid, sigmoid flexure, gall bladder, rectum, uterus, and, lastly, the stomach The metastasis was multiple in only about a third of the cases With the solitary tumors, the left side of the brain was affected twice as often as the right The cerebrum was generally the seat of the metastasis, next in frequency the dura mater, the cerebellum and, lastly, the spinal cord. The cortex is most frequently affected, and the left central convolutions more than other parts About 120 articles are reviewed from the literature for comparison.

Riforma Medica, Naples.

Last indexed page 902.

108 (XXII, No 32.) *New Pigment in Urine—Un nuovo pigmento urinario E U Fittipaldi.
109 *Tuberculosis of Glands Simulating Neoplasms.—Il morbo di Hodgkin e la tubercolosi a forma neoplastica delle ghiandole linfatiche. O Cignozzi.
110 (No 33) *Cancer Precipitins.—Cancroprecipitine e loro applicazione alla diagnosi precoce del carcinoma gastrico D Maragliano
111 Ricerche cliniche sulla separazione endovesicale delle urine dei due reni D Taddei (Commenced in No 32.)
112 2 osservazioni di encefalite emorragica. G Valdonio
113 (No 34) Protective Action of Liver in Regard to Cholera Toxin—Intorno all' azione protettiva del fegato verso la tossina colerica G Padoa
114 Come bisogna interpretare il fenomeno della spirochete pallida Hofmannii nella sifilide? R Campana.
115 Sulla formazione di anticorpi in seguito all ingestione di glutine vegetale (antibodies formed after ingestion of vegetable gluten) G Castronuovo
116 *Lead in Ice Cream and Ices.—Sulla presenza del piombo nei gelati. A. Baldoni
117 (No 35) Submucous Lipoma of Colon.—Lipoma sottomucoso della flexura coli dextra. S d Este
118 *Anemie gravi e setticemia da micrococco tetrageno albo A Brugnola.
119 *Curability of Tuberculous Meningitis.—Osservazione sulla guarigione nella men tub V E Ovazza.

108 New Pigment in Urine—Fittipaldi has isolated a *chromogen from the urine, after removal of the biliary* pigments, which he thinks has never been described before It was found only in icteric urine, never in the bile or liver tissue, and he suggests that it may have some importance for diagnosis and prognosis in case of icterus from cancer or cirrhosis The simple technic of its isolation is described

109 Tuberculosis of Glands Simulating Neoplasms.—Cignozzi's study of this subject is based on a case observed and on analysis of the literature The findings establish the fact that the tubercle bacillus is able to induce in the lymphatic system lesions and symptoms similar in every respect to those of true pseudoleukemia including hyperplastic multiple enlargement and suppuration of glands, enlargement of spleen and liver, fever, epistaxis and emaciation The complete absence of caseous degeneration in the glands suggests lymphosarcoma or other neoplasm The histologic lesions are atypical in nearly every respect, hyaline degeneration is frequent, and numerous congested vessels are prominent, the lumen permeable The best means of diagnosing the condition is by extirpation of one of the glands In his patient the enlarged glands in the neck and inguinal region nearly all suppurated, after which the patient improved. The findings in the sputa were always negative but at last accounts although the general health had improved, one apex seemed slightly affected

110 Cancer Precipitins—Dario Maragliano has been experimenting with cancer juice obtained directly from the stomach of persons with cancer of the stomach and injected into animals The animals thus treated developed a serum which had a precipitating action on gastric juice from persons affected with cancer of the stomach while no precipitation occurred with normal gastric juice He found however, that the cancerous gastric juice which he had injected contained four albuminoids *a* that common to the entire organism contained in the blood, *b*, that common to all ulcerating sores, *c*, that peculiar to the stomach itself and finally, *d* that peculiar to the cancer In the precipitation test the first three kinds of albuminoids have to be got out of the way first before the true cancer albuminoid can give the specific reaction The possible polyvalency of precipitating immune serums is a fact long since established He injected from 3 to 10 c c of gastric juice obtained from the fasting stomach of patients with unquestionable gastric cancer using rabbits and goats for the immune animals Sometimes the gastric juice was so toxic that 1 c c. was enough to kill a rabbit if not sufficiently diluted After the fourth or fifth subcutaneous injection the precipitating reaction was [illegible] at room temperature between the second and sixth minutes Earlier or later than this shows that the immunization is too intense or not intense enough The fractional precipitation is the most difficult part of the task. There have to be three solutions prepared *a*, normal human serum diluted 1 to 30 with physiologic salt solution, *b*, a solution of the secretion of a human ulceration diluted until it gives a distinct reaction with acetic acid plus potassium ferrocyanid, and *c*, the rinsing fluid from a stomach affected with gastritis, containing albuminoids independent of those ingested in the food This fluid must have a neutral reaction, and cause turbidity when treated with acetic acid plus potassium ferrocyanid These three solutions are mixed, forming a limpid fluid with a neutral reaction, and it is added to the immune serum in the proportion of one part fluid to two parts serum It is shaken up repeatedly and set aside for from 24 to 48 hours The resulting biochemical reaction passes through the stages of turbidity, formation of flakes and final precipitation of a sediment The supernatant, limpid serum has thus been freed of the precipitins specific for the albuminoids of the blood, of the ulceration and of the special secretions of the morbid stomach The residual serum contains only precipitins specific for the albuminoids of gastric cancer, and this is now being used in the clinic for diagnostic purposes, and also in a tentative way in therapeutics He does not mix this serum with the cancer juice, but pours the latter on top, diluting it to a lesser specific gravity than the serum, and makes his diagnosis from the whitish ring that forms at the zone of contact in from two to five hours, according to the activity of the serum

116 **Lead in Ice Cream**—Baldoni has been examining the vessels, etc, used in making ice cream and ices at Rome, and shows that there is danger of lead poisoning from the frequent use of lead in the vessels and implements He found from 1 7 to 2 5 mg in portions of ices weighing from 652 to 710 gm each

118 **Serious Anemia from Micrococcus Tetragenus Albus.**—Brugnola reports 2 cases and cites 2 others published by Baccarani and Arullani in which classic parasitic anemia was induced by the presence of the *Micrococcus tetragenus albus* In his 2 patients the anemia was associated with septicemia. Both patients improved gradually under iron and hygienic measures

119 **Curability of Tuberculous Meningitis.**—Ovazza reports a case of what was assumed to be tuberculous meningitis in a boy of 4 After three months of serious symptoms an intercurrent varicella lasted a week or so, after which the symptoms gradually subsided and the child was up and about by the end of the sixth month, and by the end of the year seemed to be quite cured, intelligent and lively He was in the hospital seven months The temperature was high during the first ten days of the onset, but was always subnormal after that. Treatment was purely symptomatic, without lumbar puncture, merely ice to the head during serious symptoms, repeated small doses of calomel, twice an "abscess of fixation" was induced in the thigh for revulsion, an ether iodoform pommade was applied sometimes to the head, and pills of iodoform were given occasionally, with small doses of potassium iodid

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Last indexed XLVI page 1326

120 (LXVII No 4) Epidemi af poliomyelitis ant. acuta i Hvaler lægedistrikt sommeren 1904 Nannestad 41 cases
121 *Length of Survival of the Tuberculous in Norway—Undersøgelser over livsvarigheden hos tæringssyge i Nörge. P F Holst and others
122 Studier over slambad (mud bath) P A. M. Mellbye.
123 Clamp to Remove Small Foreign Bodies in Leg or Arm—Tang til fjernelse af smaa fremmedlegemer i extremiteterne S A Heyerdahl
124 (No 5) *Medicolegal Features of Deaths from Burning—Retsmedicinsk bedømmelse af indebrændte F Harbitz
125 *Den respiratoriske therapi ved emfysem og bronchit. G A Haus.
126 How Long is Syphilis Virus Contagious?—Hvorlænge holder syfilisvirus et sig smitsomt? R Krefting.

121 **Length of Survival After Onset of Tuberculosis.**—A committee has been diligently at work since 1904 collecting data in regard to the after history of persons known to have pulmonary tuberculosis in Norway Blank circulars were sent to physicians and reports were received in return of 2,005 cases of pulmonary tuberculosis, 905 men and 1,100 women. The findings are tabulated under various headings They show among other points that out of 2,002 tuberculous patients whose history was traced for four years, 1,094 had died and 908 were still living, with 52 3 per cent still able to keep at work Out of 1,658 whose history was traced for nine years, 1,336 had died by the end of this time, and 322 were still alive, with 67 4 per cent still able to work The committee calls special attention to the surprisingly large proportion of the tuberculous with comparatively unimpaired earning capacity after four years The data further show that the average survival after symptoms of tuberculosis were first observed ranged from 36 to 59 months

124 **Medicolegal Features of Autopsies of Persons Burned to Death.**—Harbitz has been making a special study of this subject with much experimentation on the cadaver, as mentioned in an editorial Oct 20, 1906, page 1305 He describes a special case in detail in which a healthy man was burned to death in a house, the fire not lasting over half an hour He also gives the particulars of 2 cases in which the victim of a murder had been afterward burned The various points for differentiation of a crime of this kind are summarized As blisters may be produced after death, and as carbon oxid can diffuse through the tissues after death, too much stress should not be laid on these findings The effect of the heat in causing strange attitudes, contracting the internal organs and bending the limbs back on themselves is described In the first case reported the presence of 100 c c. of a reddish fluid between the skull and the dura mater was shown to be due to the action of the fire and not to extraneous violence, as first supposed See editorial in The Journal, July 28, 1906, page 276

125 **Respiratory Treatment of Emphysema and Bronchitis.**—Haus traces the course of 6 patients under treatment by respiratory exercises In the first case a man of 49 had bronchitis every winter The bronchitis was accompanied with dyspnea and cyanosis when the patient was first seen After 42 séances of respiratory therapy in the course of seven weeks the lung capacity increased from 3,000 to 4,000 c c while the dyspnea and cyanosis disappeared The excursions of the thorax increased from 1 to 5 cm He also relates his favorable experience with inhalations in treatment of catarrhal and other affections of the air passages, especially when combined with the respiratory exercises

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits or in the interests of our readers

Pediatrics, Edited by I A. Abt, M D Assistant Professor of Medicine (Pediatrics Department) Rush Medical College and Orthopedic Surgery, Edited by J Ridlon A M M D Professor of Orthopedic Surgery Northwestern University Medical School and G L. Bailey M.D., Instructor in Orthopedic Surgery College of Physicians and Surgeons Being Vol VII Series 1906 of the Practical Medicine Series Comprising Ten Volumes on the Year s Progress in Medicine and Surgery under the Editorial Charge of G P Head, M.D Professor of Laryngology and Rhinology Chicago Post Graduate School Cloth. Pp 207 Chicago The Year Book Publishers 1906

Die Behandlung der Herzkrankheiten mittels kohlensaurer und elektrischer Bäder Massage Gymnastik, und Diätetik. Gemeinverständlich dargestellt von Dr Paul C Franze Arzt in Bad Nauheim Paper Pp 61 Price, mk 1 00 Munich Verlag der Aerztlichen Rundschau 1906

Die Stellungnahme des Arztes zur Naturheilkunde. Eine objektive Kritik von Naturheilkunde und Schulmedizin nebst Beiträgen zu einer biologischen Heillehre von Dr Esch in Bendorf Paper Pp 22 Price mk. 0 40 Munich Verlag der Aerztlichen Rundschau 1906

First Report of the Clinic for the Treatment of Communicable Pulmonary Diseases Department of Health City of New York. Cloth Pp 46 Thomas Darlington M D Commissioner of Health John S Billings Jr Director

Transactions of the Twenty Eighth Annual Meeting of the American Laryngological Association held at Niagara Falls N Y., May 31 to June 1 2 1906 Cloth Pp 347 New York Published by the Association 1906

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Original Articles

HEADACHE AND EYESTRAIN *

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PHILADELPHIA.

That a vast majority of all cases of headache, certainly nine-tenths, are due to eyestrain is a truth beyond question That with headache, and often without it, a large indefinite proportion of digestional, nervous and psychic disease is due to the same cause is quite as true A few cases may be due to malfunction or organic disease of other organs, but it is not known in how many of these cases eyestrain is the primary cause of these extraocular diseases, it is also unknown in how many the eyestrain may be the direct and contributing cause of the headache ascribed to the extraocular disease

PROFESSIONAL NARCOTISM

In 31 years the members of the American Ophthalmological Society have contributed three papers suggesting that eyestrain is the cause of some headache, and one member has contended that nasal disease, not eyestrain, is the cause of frontal headache But there have been 122 papers on ocular tumors and many hundreds on ophthalmic surgical subjects Medical opinion in continental Europe has never head of eyestrain as a cause of anything, much less of extraocular disease, and in England professional pandiculation is confined to a very few "extremists," the mass still dreamlessly sleeping as sweetly as their continental brethren In our country the testimony as to the rôle of eyestrain in producing headache is positively overwhelming, but the great body of our medical men are still begging for "just a little more sleep, a little slumber, a little folding of the hands to sleep" As to the ocular origin of much neurasthenia, gastric disease, general ill-health, suicide, etc., we have only got as far as nightmare What are the results of this professional narcotism?

1 The country practitioners, and some of the silent, modest, general physicians of the cities, are awake to the possible ocular origin of these headaches, etc, but the so-called leaders, the writers of text-books, the members of the professorial class, all these, except one or two, are wholly indifferent to the matter The text-book of Allbutt is described as the best on general medicine in the world It contains not a word on the subject of the ocular origin of headache, or the ocular origin of any other disease, not even the psychic disease of text-book makers

2 The general medical profession of America is a hundred times more conscious and acknowledging in the matter than the oculists It is, of course, beneath the dignity of most neurologists to care about the cause or the cure of any disease While the governor of Massachusetts, in his inaugural address, says that untold numbers of children are becoming ruined in health because of headache, eyestrain, etc, leading members of great ophthalmic societies ridicule such folly While one great diagnostician says that all sorts of gastric diseases, as is "familiar to all," are often due to eyestrain and cured by glasses, all the stomach specialists in the world and 99/100 of the oculists of the world deny the truth While a great New York surgeon says he refers a large proportion of his patients threatened with abdominal operation to the oculist, who cures them brilliantly, the entire ophthalmic profession smiles inaudibly at this supposed "extremism" While the best orthopedic surgeon in Philadelphia publicly states that a large proportion of cases of lateral curvature of the spine are due to eyestrain and ocular function, ophthalmologists are silent or sorrowfully groan and squirm While medical journals are teeming with reports of the world's greatest scientist as to the sleeping sickness in Africa, the appalling sleeping sickness at home does not at all interest While from 40 to 60 per cent of school children, by actual examination, are suffering from headache and other systemic effects of eyestrain, and while great school teachers are trying to get the oculists to stop it, famous ophthalmic specialists are pretending to refract without a mydriatic and with the ophthalmoscope or the ophthalmometer alone, and, of course, the spectacles they prescribe are ludicrous blunders, consequently their pet amusement is to guy the "eyestrain faddist" The professor of medicine in a great university school writes me that, excepting one, he can not make the oculists of his neighborhood believe in the eyestrain origin of diseases demonstrably due to eyestrain

What is the reason for such a topsy-turvey world? Why are we caught in such a set of contraindications and absurdities?

The answers are many, but there is only one that can be emphasized here, and it is absolutely decisive As general practitioners you desire to cure your patients Most of you are not professors, mixed up with, and your personalities enslaved by college rivalries, hospital cliques and personal ambitions You don't care a button for conservatives or extremists but you desire, first of all, the truth, the knowledge of the causes and the cure of diseases

NEED OF REFRACTION EXPERTS

The single explanation of all this wrangling and misunderstanding is that refraction is not a science, your refraction work is not well done If the experiment could be rightly carried out, of ten or of fifty different prescriptions for the eyestrain of one and the same patient, by as many different oculists of different cities even in America no two would probably agree The test of the eyestrain theory has never been made no attempt at it has been made There is no uniformity of teaching as to the science and art of refraction If our car axles, dynamos, watches, engine valves and thousands of instruments of precision were made with the lack of precision customary in the diagnosis of refraction errors by the oculists of the world, our civilization would come to smash in 24 hours If the truth of the eyestrain theorist is to be tested, there is only one pair of lenses which can cure a certain patient There is not a serious and adequate school of refraction in the world, not an attempt to establish such a school Until you establish such a school most of your attempts to cure your patients of headache, neurasthenia, disordered nutrition, functional gastric, intestinal and abdominal diseases, many nervous and mental diseases, etc, will generally end in failure

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* Read in the Section on Practice of Medicine of the American Medical Association at the Fifty seventh Annual Session June 1906

Wilson,[1] of Montrose, Pa, thus puts his finger on this ailing place

> It is a fact that nearly all the headaches just above and back of the eyes are caused by defective vision, and that large numbers of school children go to their physicians and are given headache remedies without end. This is to no purpose, and they finally have to give up school on account of becoming nervous wrecks, unless by chance they happen into some jewelry store and are given some kind of lenses to wear, which may relieve the trouble to some extent. The country physician should take up refraction work, because the great mass of working people simply can not pay the fee demanded by the oculists and are forced to put up with the indifferent work of the so called opticians Two or three hundred dollars will buy the necessary equipment, and a month's work in some eye infirmary will give one a start, and one can do as well at once as any optician will ever be able to do

As a profession and as specialists we have not raised one finger to prevent or to undo the deep disgrace hinted in these lines There is not a single adequate, serious school of refraction in the world, nor is there a sign that one is coming Yet such a school is more needed than all the ophthalmic departments in all the medical colleges and hospitals of the world If there are a few careful and skilful refractionists in the United States who might agree in their diagnosis of one case, there are 5,000 who would disagree, disagree, root and branch There are whole states and territories, whole sections, in which no poor person can possibly get such medical service

Moreover, there are at the least 15,000,000 American children and adults afflicted with lateral curvature of the spine All the smiles of incredulity will not, alas, lessen the number, nor the horror of the consequences of the abnormalism There is no existing machinery, no care or solicitude to prevent the headache and other sufferings none to prevent the very existence of these millions of scoliotics The defect arises unknown and unsuspected by physicians and by orthopedists, when it is incurable the orthopedist learns of a few of the cases Surely over 90 per cent of these scoliotics owe their tragedies to ocular function and malfunction, readily demonstrable, and its result always preventable Two months ago, for example, a child of five years of age was brought to me with many complaints, vomiting of food peevishness, ill-health generally, a nurse and a physician were retained as constant attendants of the child I found a grade of astigmatism so low that great authorities in this society publicly to the profession and daily to their patients, state that it is useless to correct Both axes of the astigmatism were at 105 degrees, a defect that produces head tilting and spinal curvature The child had both Glasses were applied, and since then the head tilting and the incipient spinal curve have disappeared There is no vomiting No drugs are now required There is steady gain of weight and complete return to normal health What would have been the life history of this little one had it fallen into the hands of the "ophthalmic surgeon" who scorns the refractionist, who sneers at functional and beginning disease, who does his refraction with the ophthalmoscope, and without a mydriatic, who loves surgery 50 or 500 times as much as he does the prevention of disease, who loves surgery 5,000,000 times as much as he loves the prevention of surgery, who is 40 or 100 times more interested in a sarcoma or an osteoma, or a coloboma, than in the headache and vomiting, and "neurasthenias," and suicides of his patients?

Physiologic pathology, not the outworn and senile anatomic variety, functional, not organic disease, clinical, not laboratory and ultrascientific medicine, individualistic treatment, not that by averages and rules, prevention as well as the cure of disease, such are to be the watchwords of the future

OCULISTS AND FAKERS

At present we oculists are most busy and earnest, and effectively so in creating and commissioning "fake" ophthalmic and refraction schools, refracting opticians, peripatetic spectacle peddlers, and quack M D oculists These things are the direct result of our neglect No blame of course to them who make their chief corner stone the block we have rejected There are eighty or ninety good reasons why headaches may not be relieved by our prism glasses At present osteopathy is influencing legislatures, and ignorantly, but far more successfully than many of the profession, it is treating the millions of distorted or weakened and diseased backs and bodies of our people, we neglect the study of the spinal column utterly and wholly in the functional and beginning stages of lateral curvature Osteopathy is a product of our professional neglect and bigotry, and especially of the ophthalmic variety

Great surgeons and orthopedists say, if a child does come into their hands with lateral curvature, "O, let it go, give it some exercises, it will get well as it grows older" But spontaneous cure never comes If they pretend to treat it at all, they give it over to a nurse to handle In truth they do not treat it until they can treat it surgically, and there was never a case of organic lateral curvature cured, either surgically, or by all the horrible torture chamber machines a Hoffa could devise or picture Not a man knows the cause of this defect, and how, therefore, can there be a cure? The superintendent of schools of New York City orders his hundreds of thousands to carry their books on one side one-half the time, and on the other side the other half In this same city great classes of poor children are formed in lines and taught to bend their bodies at command to one side, and then to the other Better would it be to hold a black cat over the crossroads at midnight and mumble a charm Osteopathy is a wretched thing, but it often cures and, however, blindly and stupidly it is making some sort of use of deep massage, the stone which the medical architects refused

Eddyism is rampant in the land and professionally we are largely responsible for Mrs Eddy, her foolish children, and her million dollar temples As medical men we have wholly neglected the attitude of mind of the patient to himself, and to his disease Especially to her disease! We have been so absorbed in our so-called

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[1] The Journal A. M. A., May 19 1906.

"science," our professional dignity, our personal reputation and success, that we have forgotten the first duty of any human being the duty to be kind, and to take a personal interest in each other as individuals, especially if they are our patients The second duty, also too frequently we have forgotten to be sincere, to believe in ourselves and our therapeutics With all the follies of faith cure and of unchristian unscience, the Eddyistic sillies did not forget those two fundamental duties

Again the quacks have made use of our refused quarryings as corner stones of their healing temples It is ridiculous bigotry to make fun of the quacks we ourselves allow or create These quackeries are not made up entirely of errors, follies, greeds, and stupidities And our medical practices, "scientific" and "ethical" as we fondly imagine them to be, are not without elements and alloys of quackery, folly, and greed

The more conservative, the more "scientific," the more self-satisfied, the greater, usually, is the alloy of error and quackery Especially in the cities, especially among the leaders, the professors, the text-book makers, especially among the specialists The hope of progressive and helpful medicine lies in the general and country practitioners, the modest unknowns of the cities, the protestants and extremists Anything, even earthquakes, are needed to shatter the complacency of the success hunters and of the success getters

Every text-book, and almost every monograph, and medical journal article will be revolutionized when your oculists agree, your oculists will not agree until you as general practitioners secure the establishment of at least one serious refraction school, with a two-year, or a three-year obligatory course of postgraduate study And this, as general physicians, is your concern You will be compelled at last to force us to do our long-neglected duty

HEADACHES DUE TO AURAL DISEASE *

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Headache to day, as in the time of Hippocrates, is one of the most common symptoms presenting itself to the practitioner The modern classification varies somewhat from that laid down by the father of medicine, but, notwithstanding the progress of the ages, many cases continue to be intractable There are few symptoms whose control affords more relief to the suffering patient

Among the organs of special sense whose derangement may cause the utmost discomfort to the patient the nasal accessory sinuses and the eye have been prominently mentioned I add to this list a consideration of certain diseased conditions of the ear some of them capable of causing not only the most violent headache, but even death

The ear is generally looked on merely as a means of communication with the outside world, and its intimate relation with the more vital structures of the head is in consequence, likely to be overlooked Then too the ear, although exceedingly sensitive in responding to sound impulses does not betray a slight falling off in function as does the eye A loss of vision of 50 per cent could scarcely pass unnoticed, and yet half the hearing power may be lost without the patient being aware of it Because of this fact it is natural that the attention should have been called first to ocular defects as a cause of headache

Intimate Connection Between the Innervation of the Ear and the Central Nervous System—This was early established by Zuckerkandl and later observations have offered further clinical proof of this relationship In some instances the mere presence of cerumen in the canal has caused most intense headache Cephalalgia is fairly commonly caused by aural disease It is seldom overlooked in the acute form, because directly referred to the ear In more chronic cases, as we shall see later, the diagnosis may be more difficult

Obstruction of the Eustachian Tubes—Gradle[1] has observed that children, especially, are likely to have an almost continuous headache from slight obstruction of the Eustachian tubes With this condition the hearing may not necessarily be greatly impaired, and unless one ear be much worse than the other the underlying cause may escape observation This condition has been termed by Legal[2] cephalalgia pharyngo tympanica The headache is of a dull, heavy character, and the patient is incapable of sustained work

Careful inspection of the drum membrane should establish the diagnosis, and complete relief almost immediately follows the simple procedure of inflating the middle ear This relief is usually temporary, and steps should be taken to remove any adenoids, or other cause of obstruction of the Eustachian tubes

In the more chronic adhesive processes in the tympanic cavity the subjective symptoms are not always so definitely referred to the ear Absolute pain is seldom observed with this condition When found it is generally a referred neuralgia, and its cause must be sought elsewhere A feeling of fulness in the head, or pressure in the brain, may, however, be associated with the chronic dry catarrh of the ear

Except in the more advanced stages, the defect in hearing may pass undetected, as the patient may continue to hear the spoken voice to the maximum distance long after distinct pathologic changes have taken place in the ear

Inflammation of the Middle Ear—Headache is occasionally caused by acute inflammation of the middle ear, and under these conditions is usually relieved by paracentesis Politzer believes that some of the most obstinate headaches are caused by a hyperemia transmitted to the scalp Severe pain in the head accompanying aural disease, not confined to the region of the ear persisting in spite of treatment is regarded by Syme[3] as indicating the impending onset of intracranial infection

For many years we have recognized this to be true of the existence of meningitis or possibly of brain abscess, and we are now learning that it may be significant of the presence of a sinus thrombosis due to the ear[4]

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* Read in the Section on Practice of Medicine of the American Medical Association, at the Fifty seventh Annual Session June 1906

[1] Gradle The Journal A M A 1898 vol xl p 339

[2] Legal Deutsch Arch f klin Med 1889 vol xl

[3] Syme Indications for Operation in Chronic Purulent Otitis Media Brit Med Jour 1906 vol i p 250

[4] In addition to the authors cited in the text the reader may consult the following Paget Aural Cases in General Practice Brit Med Jour 1906 vol i p 249 Kopetzky "The Diagnostic Significance of Headache in Diseases of the Ear Nose and Throat N Y Med Jour 1905 vol lxxxii p 1170 Knapp P C A Case of Otitic Purulent Meningitis Jour Nerv and Mental Diseases 1905 vol xxxii p 739 Roughton Clinical Lecture on Cerebellar Abscess etc " Lancet 1905 vol ii p 1597 Barnhill Diagnosis of Intracranial Complications" The Journal A M A 1905 vol xlv p 1486 Jervey Med. Record N Y 1899 vol v p 351 Vansant Phila Med Jour 1899 vol iv p 484 Dundas Grant J of Laryngology 1899 vol xiv p 457

It is in the cases of old chronic suppuration, however, that we are most likely to have the more enduring forms of headache These cases may run their course for years, without any particular symptoms There may be so little discharge that it is regarded as wax, and the diminished hearing has ceased to annoy the patient, he is so accustomed to it

Exfoliated epithelium and other products of long-continued suppuration collect in the cavities of the middle ear and mastoid, often forming masses as large as a peach stone Examination shows that these masses are built up layer by layer, one outside another, until they assume such proportions that they not only fill the unoccupied space inside the temporal bone, but by pressure necrosis actually cause absorption of extensive areas of the bone

It is apparent even to the casual observer that such a process might reasonably be expected to announce its presence by the existence of more or less pain in the head This discomfort is usually described by the patient as a dull heavy sensation, but it occasionally assumes a most acute form, when the suffering is almost unendurable This exacerbation is often caused by the use of fluids in syringing the ear, and particularly by the use of peroxid of hydrogen Because of the length of time during which this mass, or cholesteatome, has been forming, it is dry and compact The addition of water almost immediately causes it to swell, with the result that a pressure that is simply tremendous is exerted on all parts with which the mass is in contact In this way it not infrequently happens that facial paralysis is caused, and occasionally a purulent meningitis may be traced directly to this source

Caries These new formations within the temporal bone are not the only cause of headache in chronic purulent otitis media, as this symptom is frequently associated with the presence of caries, especially when accompanied by granulations It is noticeable that patients undergoing treatment for the relief of chronic suppuration are able to realize the presence of masses of granulations even before the attending physician has discovered them They will complain that the head feels heavy and queer, and investigation will usually reveal granular areas Promptly following the removal of the offending growth, the uncomfortable sensations disappear

Diagnosis Diagnosis of the presence of chronic suppuration in the middle ear can often be made by simply noting the presence of discharge, and ascertaining the period of time during which it has existed In perfectly typical cases, there is likely to be an extremely offensive odor, characteristic of caries Often, however, there will be little or no visible discharge, and the conditions can be made out only by the most careful examination, using head-mirror, speculum and the other common instruments employed in aural practice It is an exceedingly common occurrence for an ear that has suppurated at some former time to remain apparently dry for many years with perhaps a few occasional crusts In these cases diagnosis is not so easily made except in the hands of one experienced in such examinations

Treatment Treatment should aim toward a complete removal of all diseased tissue This may sometimes be accomplished by the use of astringent and antiseptic solutions introduced into the ear When there is distinct caries of the bone however, the plain surgical indication is for its removal If confined to the ossicles, they may be easily taken out, and in certain cases not only will the suppuration be cured, but a very useful degree of hearing may be preserved

In more advanced cases in which the disease has invaded the temporal bone, it may be that nothing short of a complete radical mastoid operation will be curative In any event cessation of discharge will probably mean relief from headache

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CONSTITUTIONAL HEADACHES [*]

GEORGE L WALTON, M. D
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A young woman complains of constant headache of many years' duration Being asked if it is really continuous she answers, "Certainly, it never leaves me day or night" The headache is not distinctly localized There is an obvious refractive error, but its correction affords no relief There is obvious nasal defect, the treatment of which is negative, a possibility Dr Coakley has emphasized There is malposition of the uterus, but local treatment proves inefficacious, and the patient returns to the neurologist ready for the next therapeutic procedure I assume, of course, that organic disease of the brain, kidney or other organ has been eliminated and that no toxic cause has been discovered What is the probable diagnosis? Constitutional headache.

This symptom is included among the stigmata of so-called degeneration or, as I prefer to name it, deviation, but its adequate description and pathogeny I do not find I propose, therefore, to give my own idea of it

What Constitutional Headache Is—The patient may show no special physical peculiarity except perhaps unusual delicacy or, perhaps more frequently, she presents many signs of deviation from the average normal, either physical, physiologic or mental, or all three On the physical side we may find a too prominent forehead, a projection of the lower teeth beyond the upper, peg-shaped lateral incisors, hair on the face in the female, or absence of hair if the patient be a male, marked facial asymmetry, and badly formed or badly set ears On the physiologic side we may find a hypersensitiveness to sights, sounds or thoughts, sometimes associated with an extreme acuity of special sense Such patient may have vision, for example, double that of the average normal On the mental side we are peculiarly liable to find deviation Such a patient is likely to be high-strung, intense, unable to relax either physically or mentally Strong likes and dislikes are prominent Even in the course of the examination the tendency will be indicated by the exaggerated self-consciousness, the fussy antagonism, the questioning of each step in the examination, the calling for a fan, or a glass of water, and the request that the window be opened or closed Certain sources of irritation "simply drive the patient wild", or she "simply can not bear" something, though the cause may be nothing more serious than hearing another person clear his throat or seeing him rock The patient herself, meantime, may be obviously addicted to some obsessive habit as grunting sniffing or blinking, if not to habit chorea *Folie du doute,* the touching habit, hypochondriacal ideas and chronic indecision may complete the picture, for which I venture to coin the word obsessia, since all these faulty mental habits may be analyzed into obsessive tendencies A striking example of this mental peculiarity told me recently that she perfectly abominated cereals, that she simply could not stand vegetables, that she could not bear anything in the shape of an apple, that she could not abide spinach, and that baked beans made her sick at the stomach. The habit movements, the grunting and allied actions are performed by such an individual in response to a feeling that she must make them or explode. The hypochondriacal ideas result from such an obsessive desire to feel comfortable, that any variation from perfect comfort becomes unendurable.

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[*] Read in the Section on Practice of Medicine of the American Medical Association at the Fifty seventh Annual Session June 1906

This line of thought prepares us to appreciate the probable nature of the constitutional headache. In its typical form this headache is not perhaps what the average normal individual would call a headache at all. It is merely rather an uncomfortable sensation which is so irksome to the ideo-obsessive, and becomes so aggravated by the focusing of her attention on it that at last only such terms as agonizing, frightful and excruciating seem adequate. In ordinary parlance such a headache should lay the patient low, whereas she sits in the neurologist's office at the end of a long examination perhaps smiling and complacent, explaining her own ability to do so by the fact that she has an extreme degree of will power. She has ample will power but it is ill directed.

In other words, this headache is probably the patient's interpretation of the ordinary sensations resulting from cerebral activity. The sense of mental fatigue, for example, may be more acutely realized than in the ordinary individual, besides being really excessive, because the mental processes, though ill directed, are kept up more continuously than in the average individual through the patient's inability to mentally relax. This produces the vicious circle. The headache in this case is only another sign of deviation, of which the error of refraction, the congenital nasal or uterine defect are merely other indications.

The Constitutional and the Reflex Headaches.—There is perhaps no sharply dividing line between the constitutional and the purely reflex headache. The ticking of a clock may be the exciting cause of insomnia, but the very fact that a clock tick keeps a person awake indicates a sensitive organization on her part which constitutes the underlying cause. Pollen may be the exciting cause of hay fever, of which, however, the primary underlying cause must be the unfortunate constitution of the individual which renders him susceptible. Similarly, when we credit a quarter of a diopter of astigmatism with being the cause of migraine, it would probably be more accurate to say that the error of refraction is the exciting cause, while the primary and underlying cause is the inherited constitution of the patient which renders him susceptible. In other words, between the purely reflex headache on the one hand, and the purely constitutional on the other, there are doubtless a large number of cases in which the two elements are so combined and so interdependent that it is only viewing one side of the shield to class the headache as either purely reflex or purely constitutional.

Treatment.—The treatment of constitutional headache is obviously not hopeful, for its eradication would involve an entire change in the patient's inherent make-up including susceptibility to fatigue. The correction of obvious ocular, nasal, uterine or other defect is indicated by way of giving the reflex element the benefit of the doubt. Special drugs are of no value, though it is, of course indicated to build up, as far as possible, the patient's general condition not only by drugs but by exercise, diet, baths and the regulation of the habits. If by mental training the patient may be led at least to modify the obsessive tendency, a step has been made in the right direction.

CHRONIC HEADACHE ASSOCIATED WITH PELVIC DISEASE *

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By chronic headache, as I understand it in this discussion, is meant not a constant headache, but one which recurs at more or less frequent intervals and is of a uniform type. This symptom is not very common in connection with pelvic disease. In taking 1,000 cases from my note book, I find it mentioned 98 times, constituting only about 10 per cent.

In studying these cases and noting the pelvic condition with which the headache is associated, I find the greater part may be placed under two heads: First, those connected, as regards to time, with the menstrual function; second, those which seem to be due not especially to the particular pelvic disorder found in the case, but that seem to be an expression of the neurasthenia of which the pelvic lesion is one of the predisposing factors.

1. Due to Menstrual Disturbance.—Taking the first group, I find that 30 cases, or about one-third, are directly associated, as regards time, with menstrual disorders, and the one abnormality which is constant in these cases is a diminution of the amount of blood lost, either from scanty flow with the regular periods, or from delayed menstruation, the interval being more than four weeks, or from both irregular and scanty menstruation combined. In many of these cases menstruation occurred very irregularly, from five weeks to two or three months between the periods.

The most common type of headache found in these cases comes on a few days before the flow occurs, lasting from one day to several, and ceasing promptly as soon as the flow is established. The headache usually precedes the period, but in a few cases in which the flow is fairly regular, but scanty, the headache appears after the period. This type frequently accompanies chronic metritis, when tissue changes have taken place in the uterus and the organ has become cirrhotic. Headaches occurring during the flow are very rare.

The explanation of this form of headache is obvious. There is a hindrance to the normal free and sufficient escape of blood and as a result a pelvic congestion. This interference with the pelvic circulation shows itself by disturbances elsewhere and the headache is a manifestation of this.

The treatment for this variety of headache consists, first, in general measures to improve the patient's health with the hope that there will be coincidently a change for the better in the rhythm and amount of the menstrual flow. As a rule, these patients are delicate, weak, anemic, and anything which will make them stronger physically is of value. These measures readily suggest themselves and are those which are usually employed in such cases without reference to the particular cause of the trouble or the special form in which the symptoms manifest themselves. The most important are improving the digestion by insisting on as much food as can be assimilated and of a quality which will not tax the digestive organs Regular and suitable exercise to improve the muscular tone is of great importance Freedom from mental strain, as study in the case of young girls and social dissipation in those older, should be insisted on

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* Read in the Section on Practice of Medicine of the American Medical Association at the Fifty-seventh Annual Session, June, 1906.

In other words, measures which will make blood, improve its circulation and steady the nerves will tend to regulate this function For this purpose drugs are an adjunct, but should not be depended on alone The most important are iron and manganese, which physiologically tend to improve the quality of the blood Hand in hand with these general measures and for the relief of the headache itself, local treatment should be employed, and in this way much more direct and quick improvement can be attained If Nature does not provide relief by a prompt escape of a sufficient amount of blood, local depletion should be employed

Of the various methods suggested for this purpose there is none which is so simple in its application and so efficient in its results as the use of wool tampons soaked in glycerin As soon as the slightest suspicion of headache makes its appearance, or even anticipating this by a day or two, such a tampon should be inserted into the vagina and allowed to remain for two days The result will be a profuse watery discharge of blood serum which relieves the engorged pelvic blood vessels and equalizes the circulation At the end of the second day the tampon should be removed and a second substituted These should be applied every second day until the flow appears

It is not an uncommon occurrence for the patient to experience marked relief within a few hours after the first treatment, and the headache to be kept in check during the whole premenstrual epoch If repeated before every menstruation for several months, the period of headache is shortened and in many cases a cure is effected In the cases in which the headache follows instead of precedes the menstruation, the same treatment should be instituted as soon as the period is over and kept up for several days

2 *Due to Neurasthenic Condition* —The second largest group in my series of 98 cases consisted of 23 in which the headache seemed clearly due to neurasthenic condition They were not associated particularly with the menstrual period, but were brought on by overfatigue, either mental or physical. There was usually, to be sure, some accompanying local pelvic lesion, but that varied indefinitely and did not seem to be the cause The important question here is as to the propriety or necessity of doing anything for the local difficulty, and my advice is as follows

Unless there is some weighty reason for not remedying the existing trouble, I usually advise it on the ground that the pelvic disorder, if not the cause, is, at least a factor in keeping the nervous system below par, and that the patient will improve faster and more surely if this additional source of trouble is removed

It is not within the scope of this paper to go into a detailed statement of the treatment of these cases I think that headache is not a common symptom of other pelvic conditions It was noted in only 14 cases out of 130 retroflexions and versions There were 13 cases of anteversion, but most of these had at the same time scanty or irregular menstruation, and were probably of a poorly developed type Some prolapse or enlargement of the ovary was found in 8 cases Laceration of the cervix was present in 16 cases, and that is significant as emphasizing the fact that lacerations and irritations of the cervix frequently manifest themselves more by reflex disturbances than by local symptoms In only 4 cases of fibroid tumors and none of ovarian was headache present as a symptom

CONCLUSIONS

1 Chronic headache associated with pelvic disease is accidental, except when it is the most marked symptom or irregular or scanty menstruation

2 In other pelvic disorders, it is usually an expression of the neurasthenic condition of which the pelvic lesion is merely one factor or accessory predisposing cause

3 Treatment for the first class of cases consists of general building up measures and local depletion

4 Treatment of the second class consists in the rectification of existing local trouble unless especially contraindicated, but the main reliance is to be placed on prolonged and systematic treatment of the neurasthenia

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INJURIES TO THE CHILD'S HEAD DURING LABOR *

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For many years I have been anxious to enlist the interest of the obstetrician and of the general practitioner in the injuries which the child's brain is apt to sustain during parturition The general opinion prevails, and it is not wholly wrong, that the child's head is wonderfully tolerant and that the child is none the worse for prolonged labor and for instrumental delivery The physician who has delivered a woman of a living child without seriously injuring the mother and without leaving on the child the outward mark of difficult labor feels proud of his achievement, and if the child has no convulsions during the first 24 or 48 hours of life, if it appears to move all its limbs, the physician walks away with pride and an easy conscience He has done his duty according to his own best light and in accordance with the best teachings of the day So long as the sounds of the child's heart remained normal there was no apparent reason to hasten the birth of the child and his entire concern was for the health of the mother That she deserves prime consideration I shall be the first to allow, and yet I say deliberately that the world is full of imbeciles, of paralytics, of epileptics, not only in our almshouses and public institutions, but in some of our best families, who might have been normal individuals if they had been given a "square deal" at the time of birth

Let us see what happens and whether the matter can in any way be remedied In a course of studies which I began years ago with Dr Peterson, my attention was attracted to the fact that of all the cases of infantile cerebral paralysis a very considerable number were either first-born children or had been born after prolonged, often dry, labor Careful statistics of several hundred of such cases showed that less harm is done by instrumental delivery than by prolonged labor It is easy to understand, however, that unskilful instrumental delivery has been a frequent cause of trouble In first-born children and in those born after difficult labor the skull and the brain are apt to be seriously compressed As a result of this compression, hemorrhage takes place from the minute vessels, particularly the veins of the pia, and an effusion of blood follows, covering a smaller or greater portion of one or both hemispheres

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* Read in the Section on Diseases of Children of the American Medical Association at the Fifty seventh Annual Session June 1906

In the case of forceps delivery, as well as in many of the prolonged labors, the hemorrhage is apt to occur over one or both motor areas, and this one fact accounts for the frequent occurrence of spastic hemiplegias or diplegias that are developed in very young children If the hemorrhage takes place over other parts of the brain a condition of imbecility or of epilepsy may develop with little or no paralysis

From an etiologic point of view it matters not whether there is paralysis, idiocy or epilepsy, one or often all of them are developed and may be due to conditions present at the time of birth It is in only the extreme cases that the symptoms of the injury done are so manifest that the physician in attendance can observe the harm done In a large number of cases slighter hemorrhages have occurred, and the symptoms of paralysis, of imbecility and, above all, those of epilepsy are developed only within weeks, sometimes months, after birth, but the causal relation between the conditions at birth and the subsequent illness is none the less certain

I am firmly convinced that protracted labor is the most powerful factor in these conditions More than ten years ago I said, in my book in a chapter in which the obstetrician would not be so apt to find it, that the prolonged compression of the skull during the last month of pregnancy would seem to exercise considerable influence on the development of cerebral spastic palsies, but that the chief damage is done during the period of actual labor If physicians were more confident of the safety of the forceps and of their own skill to apply them, protracted labor would not be so powerful an etiologic factor as it is at present

A word of warning, therefore, should be uttered to the obstetrician that, other things being equal and, above all, the life of the mother not being in danger, it is wise to curtail the period of labor as much as possible and not necessarily to wait until the child's heart action becomes feeble. Many children might have escaped epilepsy, idiocy and paralysis if the period of labor had been properly managed

For the severe cases of meningeal hemorrhage at birth Cushing has recently suggested the opening of the skull, a washing out of the blood clots, and, so far as I know, he has practically cured two of four children on whom this plan has been tried The procedure is a daring one and it will apply only to relatively few of the cases and would not be at all applicable to that larger number of cases in which the injury at birth is not so apparent and in which the full consequences of protracted labor or of unskilful instrumental delivery are in evidence only weeks and months after birth If the condition has once been established which gives rise to paralysis, epilepsy or imbecility, little can be done by the physician, however painstaking he may be The hemorrhage that has occurred is bound to be followed by secondary processes and the normal development of the cortex and of the other parts of the brain and central nervous system associated with it will be interfered with We must depend wholly either on prophylactic measures or on more skilful manipulation of labor on the part of the obstetrician How the practice of to-day may be modified, obstetricians must determine But I can not help feeling that the medical men in attendance at confinements have for years followed a policy of indifference toward the welfare of the child and have allowed too many children to be born into the world after labor unnecessarily prolonged and in conditions that are a distinct disadvantage to society and to the individuals for the entire period of their natural lives

DISCUSSION

Dr. Effa V Davis, Chicago, said that as a matter of fact the head of the infant is intended to stand a tremendous amount of pressure She said that instead of using the forceps, a much safer plan is the regulation of the size of the child, which she believes can be controlled The mother must be under strict supervision, especially in the higher class of patients who have great leisure. The children which she has seen who have become paralytic have been children of degenerate parents

Dr. C G Kerley, New York City, declared that he has been impressed with the fact that there are more of these cases than there should be Dr Sachs' views bear out Dr Kerley's in relation to the cause being rather the trauma taking place in prolonged labors than actual injury with the forceps Many such cases are seen, he said, in out patient and in private work, and it has not been his observation that a family history of degeneracy has had much to do with it

Dr. R. B Gilbert, Louisville, Ky, quoted the old adage that an ounce of prevention is worth a pound of cure, and said that it is applicable in a matter of this sort, because the cure of infants injured during parturition has not been satisfactory The measure suggested by Dr Sachs, he said, does not commend itself to him He has seen a number of these injuries, and several years ago adopted a method which has proved satisfactory—that of inducing labor two or three weeks prior to full term, making the labor safe for the infant and often much safer for the mother He never puts an instrument into the uterine cavity, but uses tampons soaked in glycerin, daily increasing the size of the tampon The method facilitates labor and the child is born two or three weeks ahead of time, and there is scarcely a chance for injury One woman with deformed pelvis, who had had hip disease early in life, he delivered in that way four times and each of the four children was born in safety To be sure, they were reared in incubators, but at the end of the seventh month the labor was made entirely easy in this way Dr Gilbert suggested the method as a prophylactic measure rather than the application of the forceps to which Dr Sachs called attention.

Dr. J C Cook, Chicago, stated that in many years' experience in a good sized clinic he has put forth every effort to establish the relation between cerebral palsy and labor and without success None of the children, the subjects of long and tedious twenty four and fifty two hour labors, has had palsy Neither has Dr Cook been able to establish any relation between palsy and the first child In his experience it is not the first children who are afflicted, but may be the second, third or fourth He feels that the great majority of these cases are due to some pathologic condition in the brain or blood vessels, either prior to or after labor The majority of cases have seemed to him to be either prenatal or postnatal in origin rather than due to injury received at the time of birth

Dr. B Sachs, New York, said that his reason for bringing up the subject was to get the members of the Section to further the cause of respecting the child at birth as well as the mother Physicians have been taught that the mother is to be considered Of course she is, and she is of prime consideration, but the child gets far less consideration than it deserves and far less than obstetricians are able to give it Dr Sachs said that he has given the subject much attention since 1890, when he published his first paper in connection with the cerebral palsies He believes that those familiar with recent text books will know that they credit him with the division of these cerebral palsies of children into three groups Dr Sachs made the division into prenatal palsies, those due to accidents at birth and those that are of postnatal origin With the first and last obstetricians have nothing to do, but there remains a very considerable number of cases in which the palsies are absolutely the result of accidents at the time of labor, and nothing else The anatomic proof has been given in several instances in which children were born with all the symptoms which are now associated with cerebral paralysis due to difficulty in labor, the child dying after a few days Dr Sachs stated that there can be no doubt about the baneful influence of difficult labor on the brain of the child The marvel is that so many children escape

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PREGNANCY AND LABOR COMPLICATED BY ANTERIOR FIXATION OF THE UTERUS *

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In 1886, ventrofixation was welcomed We felt that at last a positive means for curing the retroverted uterus had been found The early operations surely accomplished the purpose sought for The uterus was firmly fixed to the anterior abdominal wall by sutures, in some cases, in addition to this, extensive scarifications produced strong fibrous adhesions The results of these operations were most gratifying The symptoms complained of disappeared rapidly All went well until we began to hear of complications developing during pregnancy and labor, complications causing so much obstruction by the firm and thickened anterior wall of the uterus that at times the most serious operations in obstetrics were demanded in order to accomplish the delivery

With the news of these complications, cases that only time could produce, we now find the various operators modifying the procedure, some using a single stitch to fix the uterus, others removing all sutures in two weeks, a third class including only the peritoneum in the tension-suture, and so on, we might mention the various operations all having the purpose of obviating the complications in future pregnancy and labor Anticipating the danger of future trouble, some operators have made the attachment to the abdominal wall so slight that I fear a careful examination in a certain proportion of cases might find the uterus just where it was before the operation and the patient complaining again of her old symptoms

Ventrosuspension the operation performed to-day, is primarily also a fixation It becomes a suspension only when Nature is good enough (possibly in anticipation of future pregnancy) to permit the uterus to leave the point of attachment, a ligament forming, which varies in length, thickness and elasticity Gillette[1] says that "no operator can ever know with certainty the degree of strength of his made attachment, and for this reason can never know whether it will be sufficient to hold the uterus in place and yet not interfere with the normal development of the uterus during pregnancy" The fact that these new made bands do not always enlarge with the growing uterus, as do the round ligaments and other uterine structures, is a reason for the immeasurable mischief that they occasion Again, should the fixation-suture become infected, an accident that can not always be guarded against, no matter how skilled the operator, the uterus may remain fixed

Vaginal fixation, at one time resorted to, has been abandoned on account of the serious dystocia following pregnancy A difference of opinion still exists among surgeons as to the effect of ventral fixation, or suspension, on the course of pregnancy and labor Many of the text-books still recommend it, attributing the complications that sometimes follow to errors in technic Beyea[2] says "The complications that are said to ensue nearly all occurred in operations performed before 1896, when ventrofixation was performed, not ventrosuspension The literature furnishes no proof that ventrosuspension is attended with complications" He described 42 cases of pregnancy and labor following operation, and in no instance was there a complication, also, in none of his 500 cases reported did ileus or other accidents follow

Kelly[3] enumerates three objections to the operation of ventrosuspension as usually performed and thinks that his operation, if properly done, overcomes them all 1 The operation substitutes a fixed, unnatural anteflexion for a retroflexion 2 It interferes with the natural distension of the bladder 3 In the event of pregnancy occurring after suspension, the patient's life might be imperiled by the inability of the uterus to develop normally

Kelly further says that an experience of six years has brought a satisfactory answer to each of these queries in favor of the operation While in the majority of cases ventrofixation does not complicate pregnancy, the impression has gradually gained ground that dystocia may follow in a certain proportion of cases, so that many surgeons have abandoned its use in child-bearing women

Gillette[1] states "Reports of such disasters have now become so numerous that I think this operation has had its day and will soon be relegated to the junk heap occupied by many another pernicious discarded surgical procedure"

Ten years elapsed before we began to appreciate fully the obsetric complications[4] In the past decade we have accumulated sufficient material to say definitely that a new chapter has been added to obstetrics This chapter, I feel, will be enlarged on in the future, unless the operation is abandoned

In this paper it is my purpose to consider some of the complications that are liable to occur during pregnancy and labor, to review three cases,[5] and, finally, to study briefly the literature for the purpose of determining whether either operation is justifiable from the obstetric standpoint

CASE 1—*Ventrofixation followed by Obstructed Labor, Sloughing of the Cervix, and Vesicovaginal Fistula*

Mrs W was admitted to the Philadelphia Lying in Charity, June 9, 1897

History—She had had one child at term Two years before, ventrofixation had been performed She had had two miscarriages since, and she came to us pregnant for the fourth time, the uterus now carrying the fetus to term She stated that she had fallen in labor 18 hours prior to admission, and that her physician had twice applied forceps without success

Examination—She was much exhausted from the long labor She had fever and rapid pulse The fetal heart could not be heard Internal examination revealed the cause of the dystocia The posterior lip of the cervix was drawn up and posteriorly, the anterior uterine wall acting as an obstruction to the engagement of the cephalic extremity With the long labor, the death of the infant, and the excessive moulding of the presenting part, it had at last made some descent.

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* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association at the Fifty seventh Annual Session, June 1906

[1] Gillette Ohio State Med. Jour., August 106

[2] Beyea *Penna Med. Jour May 1906*

[3] Kelly Operative Gynecology 1902, vol II

[4] Noble Amer Jour Obstet. August 1896

[5] Two of these cases have already been reported the third case demeanded Cesarean section

Operation—The patient (in bad condition) was anesthetized, and the edematous and injured cervix was dilated Forceps were then applied to the much moulded head, and, with axis traction, she was delivered The infant weighed seven pounds The lacerated cervix could now be easily felt, and the thickened anterior wall of the uterus, which had caused the obstruction

Postoperative History—After as careful a toilet as was possible with the patient in so bad a condition, she was put to bed. As might have been expected, she developed a rapid putrid infection, with high temperature, rapid pulse and offensive lochia The anterior lip of the cervix sloughed off, and with this, a portion of the floor of the bladder A vesical incontinence was then explained by a fistula

She improved slowly, but it was not until one month after her delivery that she was in condition to make a repair of the bladder injury The fistula was found high up in the left side of the cervix, and communicating with an extensive laceration of the latter It was first necessary to repair this laceration, then the fistula was closed with silver wire sutures The stitches were removed in two weeks, and the patient was discharged in good condition

CASE 2—*Ventrofixation, followed by Pregnancy High Position of the Cervix and thickened anterior Wall of the Uterus Labor prematurely Induced*

Mrs W aged 33, was admitted to the Philadelphia Lying in Charity, Jan 15, 1898

History—She had had three children, all living Three years before, one ovary had been removed and ventrofixation performed She menstruated regularly after this operation until May 18, 1897 After having missed her first period, she had a show every two weeks for three months Fetal movements were felt in September In December there was a show, with great pain, for three weeks, and at the same time there was lumbar pain and irritability of the bladder, accompanied by a constant dragging pain in the sacral region and lancinating pain at times Both inguinal regions were the site of continuous pain, but it was most severe in the left side and down the thigh

Examination—On admission, she was found to be pregnant seven and one-half months The ovoid was presenting by the breech Internal examination was accompanied with pain, it was difficult to reach the cervix which had been drawn upward and posteriorly, the anterior wall of the uterus was much thickened, and seemed to offer an obstruction to the engagement of the presenting part External version was performed, and the patient was kept in bed with lateral compresses to the uterus We succeeded without much diffifficulty in keeping the head at the pelvic inlet.

Operation—Fearing that by allowing the patient to go to term we might have greater trouble, it seemed wise to induce labor at the eighth month This was carried out Jan 20, 1898, by introducing two rubber bougies into the uterus This was followed by slight pain and an unfortunate rupture of the membranes The pains gradually became more frequent and severe, but were not accompanied with dilatation After fourteen hours without any real progress, the cervix dilated to the size of a quarter dollar We gave ether, and terminated the labor with forceps Some difficulty was experienced in dilating the cervix.

During the operation it was noticed that, although the fetal heart had been closely studied during her labor, the waters were stained with meconium We feared the death of the infant and unfortunately, we were right. The cord was pulseless and the fetal heart could not be heard.

CASE 3—*Ventrofixation, Labor Obstructed, Anterior Wall of the Uterus Greatly Thickened, Resembling a Fibroid Tumor, Cesarean Section*

Mrs M, aged 33, a multipara was seen by me in consultation, Feb 15 1906

History—The first born of her children is 10 years old. This labor had not been difficult Two years after the birth of this child, and eight years ago, the uterus, for the relief of retrodisplacement, was suspended to the anterior abdominal wall A stitch abscess prolonged the convalescence Three years after this operation, her second child was born after a difficult labor, which ended with forceps The child was born alive

Present History—The patient is pregnant at term, and already twenty hours in labor She stated that she has had much discomfort throughout the pregnancy, chiefly a dragging sensation and pain in the ovarian region The membranes had ruptured soon after the onset of labor The pains at first were strong and intermittent, but now are less severe and almost continuous

Examination—The uterus, the size of a pregnancy at term, was irregular in shape, suggesting a transverse presentation A marked depression was seen on the abdomen, at the place of the attachment of the uterus to the abdominal wall The pelvis was normal in size and shape The vagina was dilated, and the cavity of the pelvis empty High up, near the sacrum, the cervix was felt with difficulty Even after a test of twenty hours labor, the cervix was not dilated A large mass, the thickened anterior wall of the uterus, was felt at the brim of the pelvis, completely occluding the inlet With difficulty the finger was inserted into the cervix, and the presenting part could not be positively diagnosed The child was in an imperfect oblique position, with the head to the right The fetal heart was heard, but not distinctly

Operation—As the patient had been a long time in labor, with some of the early symptoms of obstruction, she was immediately prepared for operative interference. Anticipating section, several hours elapsed before ether was given her Even with the relaxing effect of anesthesia, the cervix remained high, and the obstructing tumor could not be displaced Craniotomy could not have been performed. Cesarean section was the only method of delivery possible

On opening the abdominal cavity, the uterus was found bound down in front It was drawn into the wound, a longitudinal incision was made, and the child was rapidly extracted Then the tumor (the hypertrophied anterior wall of the uterus) could be distinctly felt as a spherical mass projecting into the cavity of the uterus After liberating the uterus from its point of attachment to the anterior abdominal wall, the incision, now on the posterior wall of the uterus, was closed Convalescence was uneventful, and mother and child are doing well

COMPLICATIONS TO PREGNANCY AND LABOR.

If the uterus is found fixed, it is more likely to occasion dystocia than when it is suspended, but even in this case trouble may follow, as illustrated in a case reported by Gillette,[1] in which death resulted from internal hemorrhage following the tearing loose of the suspensory ligament from its uterine attachment It has brought with it a flap of uterine tissue about the size of a silver dollar In many of the later cases reported the trouble followed a suspension carefully performed

The complications have been tabulated by Kelly[3] as follows 1 Marked retraction of the scar, due to the tugging of the adherent uterus 2 Constant hypogastric pain 3 Retraction and displacement of the cervix, even up into the abdominal cavity 4 The formation of a tumor obstructing the pelvic inlet, resulting from hypertrophy and deficient expansion of the anterior uterine wall 5 Excessive thinning of the posterior wall of the uterus 6 Abortion or premature labor 7 Persistent and excessive nausea

During labor the following complications may be noted 1 Prolongation of the pregnancy 2 Inertia of the uterus, due to excessive thinning of its walls 3 Dystocia, due to the [illegible] or formed [illegible] anterior wall of [illegible] 4 to dilate, owing to its abnormal position 5 Increased frequency of abnormal presentations 6 Rupture of the scar of fixation 7 Rupture of the uterus

In 1905, Andrews[6] collected from foreign and American literature 395 cases of pregnancy following ventrofixation This report included Noble's[4] cases, collected in 1896 In 259 of these cases the labor was normal, the remaining 146 cases were complicated in some way

Abortion occurred 36 times, that is, in almost exactly 9 per cent So far as these figures go, they do not point to a special liability to abortion after ventral fixation He further says that we must consider, on the one hand, the fact that several of the patients had had abortion before the operation and, on the other hand, that unsuccessful results and uninteresting cases are not so likely to be reported as are successful results and interesting cases, such as those in which labor is terminated by Cesarean section

Dragging sensations, pain, dysuria, and vomiting were present In one case collected by Noble[4] premature labor was induced because of persistent vomiting High position of the cervix was recorded in 22 cases This is the most common difficulty met with after ventrofixation Cesarean section was necessary in 20 cases In each case the cervix was high, and in many the fetus could not be reached from below Rupture of the uterus was noted in 3 cases This accident may take place spontaneously, owing to the extreme thinning out of the uterine wall, or may follow attempts at version

Clark and Bowley[7] report a case of fixation performed in 1901 In 1903 she became pregnant and went to term The fetus was in transverse position The cervix was high, and the anterior wall of the uterus much thickened Internal version was decided on, when a rupture of the uterus was discovered Cesarean section was immediately performed and the patient recovered In my case demanding Cesarean section the cervix was above the sacral promontory

Dickinson performed Cesarean section in a case in which the external os lay against the sacral promontory and the internal os was higher than the first lumbar vertebra

In 1904 Lynch[8] collected also 20 cases of Cesarean section performed for fixation Some of these cases are included in Andrews'[6] report In 19 of these cases the position of the cervix was mentioned It was situated above the promontory of the sacrum The pelvis was normal or only slightly contracted in every case but one Twins were noted in 2 cases There was transverse presentation in 15 cases Vertex was noted in 3 cases, the breech, in 2 cases, in 3 others the position was not given In these 20 Cesarean sections, the maternal mortality was over 38 per cent, and in the 18 cases in which the result to the fetus was noted there was a mortality of 44 5 per cent

In 1896 Dorland[9] tabulated 179 cases of pregnancy following this operation In only 38 per cent was the pregnancy uncomplicated In 14 per cent of the cases abortion and premature labor occurred

	Cases	Per cent.
Retraction of the cervix to the level of the promontory or higher	10	7 0
Threatened rupture of the uterus	9	6 5
Abnormal presentations	9	6 5
Serious dystocia	23	17 0
Postpartum hemorrhage	3	2 2
Retained placenta	3	2.2

Version was performed nine times, three children died Forceps were used eleven times, three children died Cesarean section was resorted to six times, three mothers and three children died Craniotomy destroyed one child, one child died after a breech extraction, and one mother perished with a retained dead fetus The maternal mortality was 14 per cent., the fetal mortality, 58 per cent

These statistics and my experience with the cases herein described make me feel that it is unwise to perform fixation or suspension of the uterus before the menopause

Lynch[8] says "I am inclined to take the ground that neither procedure is justifiable until after the menopause, as it does not seem proper to undertake an operation for the cure of a condition that does not threaten the life of the patient and merely exposes her to a certain amount of discomfort, when we know that it may give rise to most serious dystocia should she become pregnant"

The high *fetal and maternal mortality following* dystocia, especially after Cesarean section (almost 50 per cent.) makes it very important that all cases be very carefully studied in order that a careful diagnosis of the extent of obstruction may be ascertained I take it *that the appalling mortality has been due in part to* an inaccuracy of diagnosis and to the too long indulgence in temporizing methods of treatment Should the patient become pregnant, it is important to look immediately for symptoms that suggest suspension or fixation These are nausea, vomiting, irritable bladder and dragging pains Vaginal examinations should be repeatedly made for the purpose of ascertaining the position of the cervix and the anterior abdominal wall. In early pregnancy it will be possible to liberate the uterus by abdominal section. When the patient is seen only just before labor, *this procedure is contraindicated owing to* hemorrhage and the fact that liberation of the uterus does not remove the obstruction in the anterior wall

Goubaroff[10] and Bidone[11] report a case in which, during labor, the uterus was liberated without benefit It was finally necessary to dilate the cervix artificially and perform craniotomy

Dorland[12] and Noble[4] have advised the induction of labor (at the eighth month) whenever a study of the case threatens difficult labor

Lynch[8] thinks that the field for the induction of premature labor is extremely limited, for these reasons

1 It does away with the possibility of spontaneous labor at term

2 It is associated with a tremendous fetal mortality

3 The operation may prove to be extremely difficult in the cases in which it may be indicated, and in some instances prove impossible of accomplishment. In my second case reported, labor was induced at the eighth month of gestation, but, failing in this method of treatment, it was finally necessary to perform an accouchment forcé I am opposed to inducing labor in this class of cases, as I am opposed to its use in contracted pelves The difficulty in estimating the length of gestation and the high fetal mortality makes it wiser to let the patient go to term and have the test of labor

In the latter months of gestation the shape and size of the uterus must be studied and the position of the fetus determined If the uterus is fixed, the fetus will often occupy an oblique or transverse position, and the cervix may be drawn upward and backward Occluding the inlet of the pelvis may be found the much hypertrophied anterior wall of the uterus When these symptoms are found at term, the case should be looked on as greatly complicated The progress of labor is usually retarded It is often ushered in with the rupture of the membranes As a rule, the pains are abnormal Usually they are not severe and soon lose their intermittent character Owing to the unequal development of the uterus, the anterior wall much thickened and the posterior wall greatly thinned, the cervix does not dilate

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[6] Andrews Jour Obstet and Gyn. British Empire, August, 1905

[7] Clark and Bowley Johns Hopkins Hosp Bull March 1905

[8] Lynch Johns Hopkins Hosp Bull., May 1904

[9] Dorland Univ Med. Mag., December 1896

[10] Coubaroff Medical Week, Paris vol. iii 1895

[11] Bidone Distocie gravi da isteropessi atti della Societa Italiana de obstetricia e ginecologia 1896 vol iii p 258

[12]. Dorland Amer Jour Obstet. January, 1897

If, after the patient has had the test of labor, the cervix is within reach, it may be manually dilated and the forceps or version resorted to If the cervix is within reach and an obstructing tumor is found, it may then be necessary to make Duhrssen's incisions of the cervix before applying the forceps

In exceptional cases this course will not suffice, and the Cesarean section must be resorted to The fallacy of allowing Nature to take her course or of attempting the forceps operation without first dilating or incising the cervix, the first case reported illustrates These remarks, I hope, will prompt a discussion, not of the various methods of performing ventrofixation or suspension, but of the wisest methods of treating pregnancy and labor, should they be so complicated

1909 Spruce Street

DISCUSSION

Dr S P Warren, Portland, Me, said that he had just passed through his first experience with labor following a ventrofixation, in which the gestation was or had been normal He was called in consultation as to the method of delivery The labor had taken the course which seems to be classical in these cases, beginning with escape of the waters without pain, then pain commencing after a few hours and steadily increasing After thirty six hours there was no presenting part, the cervix was just above the reach of the finger and far back, and pains were severe He advised laparotomy and freeing of the adhesions, and Cesarean section if necessary afterward While another consultant and himself were preparing for operation, the head was found low down in the strait, and in a posterior position, while there was decided hemorrhage Delivery was hurried with short forceps, and as soon as the child was born there was a profuse spurting hemorrhage Examination showed complete central rupture of the cervix, extending vertically into the body of the uterus The tear was sutured and the patient did well The question of ventrofixation is very important to the obstetrician In cases of child bearing women with retrodisplacements and constant backache, should the uterus be suspended? Suppose the woman subsequently becomes pregnant, what may the obstetrician expect Ninety four per cent deliver themselves without trouble How are the other 6 per cent to be dealt with?

Dr J W Bovée, Washington, D C, said that ventrosuspension or ventrofixation is an illogical operation, accompanied by instances of difficulty in delivery, intestinal obstruction and death There had also been failure to retain the uterus in its proper position

Dr C C Fredrick, Buffalo, N Y, used to do ventrofixation and ten years ago saw a woman die in whom he had done the operation two years previously, at that time he said he would never do it again unless the patient was sterile, or unless it was absolutely impossible for her to become pregnant. He has kept his vow He protested against ventrosuspension It does not hold up the uterus He has performed the operation and later has been compelled to open the abdomen and found the ligament nearly obliterated There are other better means of holding a retroverted or otherwise displaced uterus

Dr I F Lawrence, Columbus O, said that he had had no experience with women confined at term following ventrofixation or ventrosuspension but he had had two unfortunate cases of obstruction of the bowels following ventral suspension Two other cases gave him much anxiety, one of these aborted twice and the other three times The latter was anxious to become a mother and submitted to a second operation In this he separated the attachment to the abdominal wall and shortened both broad ligaments She subsequently gave girth to a healthy child Ventrosuspension or fixation or any other operation which destroys the mobility of the uterus cannot be considered either logical or surgical The first movement the uterus makes is that of descent before it becomes retroverted This descent is made possible only by a relaxed broad ligament The logical and the surgical thing to do is to shorten the broad ligament first and if need be, the uterosacral ligaments according to Dr Bovée's method

Dr G M Boyd, Philadelphia, was sorry that more had not been said of the obstetric complications The surgeon may not attend the patient during pregnancy, but if he finds hi patient in a long labor with the cervix drawn up almost beyond reach, the situation is often a serious one The patient should be carefully studied during her pregnancy, and the obstetrician should be governed by the size and position of the cervix and the position of the fetus If the cervix is not high and the head is dipping into the inlet during the latter months the patient may go to term and through labor without complications It is always unwise to induce premature labor in these cases

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INSTRUMENTAL DILATATION OF THE PARTURIENT UTERUS *

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The object of this paper is the consideration of the various methods of dilatation of the parturient uterus with special reference to the indications for and the results of the use of the steel dilators as a substitute for the manual methods of dilatation, particularly in those cases in which some urgent indication for the termination of pregnancy or labor is present

In a general way the conditions which may call for a cervical dilatation may be classed under the headings of hemorrhage, toxemias of pregnancy and diseases complicated by pregnancy, and to these must be added the condition of abnormal rigidity of the cervix which nature fails to overcome unaided even after a fair trial Various other conditions may necessitate the operation at any time, though much less commonly than the conditions named

The various methods of dilatation which must be taken under consideration to meet these various conditions are manual dilatation, instrumental dilatation and vaginal Cesarean section, and the choice of operation must be made in each case in accordance with the conditions present, although general rules for procedure can be formulated

MANUAL DILATATION

There is no doubt but that the hand is the best and safest dilator which has been discovered as yet and is to be preferred to any instrument in proper cases, but its usefulness is limited by the fact that it is easily exhausted and therefore can give satisfaction only in cases of slight or moderate difficulty, while the fact that even in these cases, the pressure of the cervical ring necessitates more or less frequent change of hands in all but the easiest operations adds markedly to the danger of infection of the patient during the operation In cases of marked rigidity the hand is absolutely inefficient. Safe dilatation by any method depends on the recogni-

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* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association at the Fifty-seventh Annual Session June 1906

tion of the principle that the cervix is composed of muscular tissue and that dilatation depends on tiring out the muscle and not stretching it. Proper cervical dilatation demands in many cases such a prolonged dilatation that the hands of the operator become incapacitated for the extraction of the child which is to follow, with the result that the chances of the child are compromised to a greater or less degree, particularly if the extraction proves at all difficult, while the trauma to the vagina in a long operation adds distinctly to the danger of sepsis.

The facts that the hand is capable of exerting efficient pressure for only a limited length of time, that in patients who are not in labor the cervix must usually be partly dilated instrumentally before the hand can be used at all, as the fingers can not be passed through the internal os, in the majority of cases, until partial dilatation has taken place, and that in many cases the cervical rigidity is so marked that the force which the hand can exert is inadequate for the purpose, at least without subjecting the patient to a prolonged operation attended by a marked degree of shock and trauma, make it evident that manual dilatation is a procedure of limited usefulness and that in difficult cases or in cases in which a rapid delivery is indicated, the substitution of a more efficient method is necessary.

In most cases of placenta prævia and in cases of broken cardiac compensation complicating pregnancy, as well as in the majority of cases in which indications for immediate delivery arise after partial dilatation of the cervix has taken place, the rigidity of the cervix is comparatively so slight that dilatation can be accomplished by the hand without impairment of its functions, and in this class of cases the hand is the best dilator that we have. The dilating power of the hand must be intelligently applied, or manual dilatation becomes a source of great danger to the patient, particularly in the soft, but brittle cervix of placenta prævia. The literature of manual dilatation is full of cases which show the damage that can be done if the cervix is dilated too rapidly and without due appreciation of the possibilities of danger. The desire to hasten the operation as much as possible in the presence of threatening symptoms often leads to bad results in cases in which patience and time would obviate most of the danger.

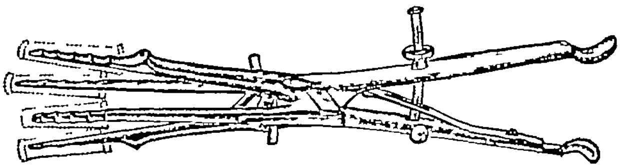
INSTRUMENTAL DILATATION

In many cases in which manual dilatation is impossible, or possible only after a dangerously prolonged operation, the methods of instrumental dilatation find their place. In this class we must place the majority of patients with eclampsia, cases of concealed or accidental hemorrhage, and such other patients as present indications for immediate delivery in the presence of a degree of cervical rigidity which is more than moderate. In the last class are included cases in which induction of premature labor is indicated in the absence of any attempt of Nature toward taking up or dilating the cervix when there is no reason for hurry, since in these cases labor is best induced by partial dilatation of the cervix followed by packing the cervical canal and vagina with gauze, leaving the rest to Nature. Instrumental dilatation may also be indicated in the rare cases of placenta prævia which present a marked degree of cervical rigidity.

Instruments.—The instruments which have been devised for the purpose of dilating the cervix are many and varied, from the de Ribes and Barnes elastic bags to the powerful Bossi dilator and its modifications. The field of usefulness of the elastic bags is a limited one. It may be defined as existing only in patients in whom the induction of labor is considered desirable in the absence of reasons for haste, for example, induction of labor for deformed pelvis when Cesarean section is not considered advisable, and even in these cases since a certain degree of cervical dilatation is necessary for the introduction of the dilating bags, a preliminary dilatation by means of a steel dilator is usually necessary. In placenta prævia, and in broken heart compensation, when rapid delivery is desirable to shorten the period of danger, their action is too slow to be satisfactory, while in the eclampsia, the most common indication for instrumental dilatation, all slow methods of dilating the cervix dependent on uterine irritation are absolutely contraindicated on account of the increase in convulsions which attends their use.

The earlier steel instruments were unsatisfactory owing to their lack of power and the fact that even after full expansion the degree of dilatation which they were capable of was often insufficient to overcome the rigidity of the cervix, and a more or less difficult manual dilatation was necessary to complete the operation.

The first satisfactory dilator was the Bossi dilator, a powerful four-bladed instrument, which possesses certain very definite advantages. Almost any cervix can be dilated easily and rapidly from the beginning, the application of force to the cervix by means of the four blades stretching it in all directions, while a continued pressure is maintained which is not possible in manual dilatation by any method. When a moderate degree of dilatation is accomplished the small tips of the blades necessary for use in the undilated cervix can be covered with broad shields and the danger of cutting or splitting of the tissues by the smaller tips avoided. It has certain very definite disadvantages, it is too powerful, or rather, since the force is applied by means of levers controlled by a screw, it is possible to exert too much force and impossible to control it intelligently. Even though fitted with a device for measuring the amount of force applied it would still be dangerous, because each increase in expansion of the blades is regulated mechanically, and a very slight turn of the screw may be enough to rupture the cervix.


The author's dilator

The ideal instrument for dilatation is one which, while capable of accomplishing the work done by the Bossi dilator, is under the absolute control of the operator. In other words, the power must be applied by the hand and be susceptible to intelligent regulation according to the resistance to be overcome. As a step in the right direction, I would instance my own dilator, which is the only one of the more powerful dilators that I have used. To my mind it has the great advantage over the Bossi that the force applied to the cervix is absolutely under the control of the operator and the use of force enough to do serious damage is an indication of lack of judgment or inexperience on the part of the operator. My own experience with it has convinced me that the cervix can be dilated from the beginning to three quarter dilatation with no more trauma to the cervix than in a carefully conducted manual dilatation and with far less shock to the patient on account of the shortening of the operation

Various claims have been made for instrumental dilatation which can not be substantiated, but properly performed it has very definite advantages, both for operator and patient It has been said that in some cases the vagina is so small that it is lacerated by the introduction of the hand for manual dilatation, a danger which does not exist in instrumental dilatation This is unquestionably true in certain cases, but the point is lost sight of that dilatation is usually followed by operative extraction and that the most complete dilatation of the vagina possible is desirable before extraction, particularly in a primipara, is undertaken The assertion that the frequently repeated change of hands necessary in all but the easiest of manual dilatations adds greatly to the danger of septic infection, can not be contradicted and on this ground instrumental dilatation is by far the safer operation, but since vaginal dilatation is always indicated as a preliminary operation and since we have as yet no substitute for the hand in that operation, the danger of sepsis can never be entirely eliminated The greatest advantages of instrumental over manual dilatation are greater power, resulting in the shortening of the operation, the possibility of maintaining a constant pressure of almost any degree desired, and the saving of the hands for the operative procedure to follow The greatest disadvantage is the possibility of serious damage if the steel dilators are employed unintelligently or in improper cases

Method of Use—The chief requirements for the proper use of a steel dilator are an accurate perception, which can only be gained from experience of the degree of force which may be safely exerted in the individual case, patience to tire out and dilate instead of rupturing the cervical sphincter, and a disregard of the time consumed in the operation, only qualified by the condition of the patient. Undue haste is the greatest source of danger and an accurate knowledge of the patient's condition during the operation must be maintained to guard against this temptation for most of us are prone to hasten the operation unduly in order to see the results of our work, thus inflicting an unnecessary degree of shock and trauma to the patient

Technic—The cervix should be exposed by a speculum and the anterior lip seized by the bullet forceps and drawn down to the vaginal outlet The small tips of the dilator are then passed into the cervical canal and then through the internal os Manual pressure on the handles to the highest degree consistent with integrity of the cervix is then applied, the cervix being kept under constant tension The dilatation of the cervix can be observed by the eye or by the disengaged hand of the operator, who can thus estimate the degree of tension to which the tissues are subjected and judge the force which can be exerted without danger As soon as sufficient dilatation has taken place, the larger tips are applied to diminish the risk of cutting the cervical tissues and thus starting a tear and the dilatation is continued until the point has been reached when the cervical rigidity has disappeared and the hand can be passed into the uterus and dilatation easily completed As a general rule the cervical rigidity is practically overcome by the time the cervix is half dilated, and the process can be easily finished by the hand, the same precautions against rupture of the cervix being observed

Results—It will be urged against the steel dilator that extensive cervical laceration is caused by its use, but similar results follow manual dilation, and in my experience extensive laceration not infrequently occurs in natural labors where dilatation has been accomplished by the membranes or by the presenting part My own experience is that the results are not so very different as regards laceration whatever mechanism of dilatation has occurred, although the possibilities of damage are necessarily much greater when a powerful instrument is employed, particularly if undue force is used or improper cases are selected

In the soft but easily torn cervix which is seen in placenta prævia, the steel dilator may be a source of great danger and is seldom necessary, since it is very rare to find sufficient rigidity in these cases to be a serious obstacle to manual dilatation In multiparæ with old cervical lacerations the steel dilators must be used with added precautions since comparatively little force is needed to extend an old tear, but while an instrument of the type of the Bossi dilator is so dangerous as to be practically contraindicated in these cases, the careful use of a dilator controlled by the hand is comparatively safe

It is in the eclamptic patient with a rigid cervix, in whom no sign of labor is present, that the steel dilator finds its greatest usefulness, shortening to a reasonable time, operations which previously required hours and resulted in the death of the patient from shock, with the result that one element of danger in eclampsia, the danger of overwhelming shock from a prolonged operation, has been eliminated

In a series of twenty cases in which the manual steel dilator was used, I find notes made at the time of the discharge of the patient which show that three patients suffered from extensive cervical tears reaching to the vaginal vault In the other cases, laceration was noted as slight or moderate in degree Two of the three cases of excessive laceration were cases of placenta prævia in which my experience has taught me that the steel dilator is seldom a necessary or even advantageous instrument, and always carries a certain risk over manual dilatation In the third case, complete dilatation was reached in twenty-three minutes from the beginning of the operation, whereas forty minutes is as short a time as is consistent with safety in all but the exceptional case, since it takes at least that time to tire out an average cervical muscle without doing more or less serious damage

On the other hand, I find in cases of complete placenta prævia dilated manually the same tendency to deep laceration, and I believe that undue haste in the presence of hemorrhage is the principal factor in causing laceration, the cervix in placenta prævia being unusually brittle and non-elastic Any instrument which increases the tendency to the application of undue force in these cases should be discarded, as more harm is to be apprehended from its use than any benefit which it confers

The great advantage of the steel dilator over the manual methods of dilatation can best be emphasized by the following case

Mrs F, aged 29 Third pregnancy Confinement expected March 15 On December 25 patient was seized with sharp abdominal pain and slight flowing which was relieved by rest in bed and moderate dose of opium

On December 29 pain and flowing recurred in moderate degrees, but without elevation of pulse or temperature About 6 p m patient had a sudden sharp hemorrhage losing from one-half pint to a pint of blood. Pulse jumped to 120 and patient fainted. Patient was seen at once by Dr Crane, who called a consultation Examination showed blood clot protruding from cervix, and apparently a placenta prævia Immediate delivery was advised and accepted Attempts at manual dilatation persisted in by three physicians for two hours, resulted in cervical dilatation to a degree that two fingers could be inserted through the os with considerable difficulty and no further progress seemed possible The patient's condition then became such that further ineffective operation was thought inadvisable and opiates and general stimulation were used.

Next morning the patient was sent to the Boston Lying In Hospital Examination showed a patient slightly built and showing signs of marked anemia. Pulse, 120, of fair quality Temperature, 101 On abdominal palpation uterus was found to be distinctly larger than a normal seven months' pregnancy and showed marked irregularity on the right side. No signs of labor were present The fetal heart could be heard

The vaginal examination showed the cervix dilated sufficiently to admit two fingers and extremely rigid, resisting attempts at further dilatation. The cervical canal was filled with clots and a *low attachment* of the placenta, practically a marginal placenta prævia could be made out. By means of the steel dilators the cervix was easily and rapidly dilated and a dead child weighing 2½ pounds extracted. The time consumed in the whole operation was twenty minutes The placenta was found detached and free in the uterine cavity and removed Following placenta contraction, the uterus expelled a quantity of blood clots, from one pint to one and a half in amount, and other clots were removed from the right side of the fundus, thus accounting for the irregular enlargement of the uterus and for the marked signs of hemorrhage without sufficient external loss of blood to account for the symptoms Examination of the cervix showed no fresh tear

During the early days of her convalescence the patient ran a mildly septic course, being treated by irrigation with sterile salt solution, followed by the instillation of 2 ounces of 5 per cent alcohol into the uterus where it was allowed to remain. On the sixth day the temperature reached normal and remained there until the time of discharge on the seventeenth day

This case illustrates the ease and safety with which cervices too rigid for manual dilatation can be dilated by an efficient steel dilator, and shows the amount of operative shock, as well as the danger of infection, which could have been avoided by its use in the first place

VAGINAL CESAREAN SECTION

In spite of the great power which it is possible to apply by means of the steel dilators, an occasional case will be found in which the cervix is excessively rigid, or the seat of cicatricial stenosis so that the degree of force necessary for dilatation or the length of time required for the operation may be such as to render the operation unjustifiable and a more rapid method is indicated Although I have never yet seen such a case, there are unquestionably cases where a cervical indication exists for either a vaginal or abdominal Cesarean section and the choice of operation must be made in accordance with the other conditions present

Theoretically I believe that there are certain objections to the vaginal Cesarean section In the first place it is an operation best adapted to the hospital where there are proper assistants and appliances and is not suited to the out-of-town practitioner's needs, even if he is qualified to perform it In the second place it requires a degree of surgical knowledge and skill which can not be expected except in the specialist In the third place I can see possibilities of considerable danger in its performance I have seen at least one report of injury to the bladder which resulted in a vesicovaginal fistula requiring a secondary operation, not a serious danger with the patient's life at stake, still a danger to be considered Finally, from my experience with abdominal Cesarean section, I have learned that the uterus splits readily, even when a sufficiently large incision has been made for the extraction of the child, and I can not but believe that the vaginal incision will at times be extended into a rupture of the uterus requiring an abdominal operation for closure, in a patient who has not been prepared for a laparotomy

Theoretically then I believe that the cervical incision should be reserved for the extremely rare cases in which dilatation is impossible or too dangerous, and in which abdominal Cesarean section is believed to be contraindicated for some reason and that instrumental dilatation, properly performed, offers the best chance of safety to the majority of patients

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MANUAL AND INSTRUMENTAL DILATATION OF THE PREGNANT AND PARTURIENT CERVIX *

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Most of the graver obstetric operations find their necessity in the difficulty or impossibility of overcoming two barriers to delivery by the natural passages The first of these is the resistance offered by the bony pelvic inlet and the second the obstruction of the cervix

Leaving out of consideration for the moment the causes of fetal dystocia, I believe that, broadly speaking, the most important factor in maternal dystocia is in the large proportion of instances of this second barrier to the progress of delivery, namely, the barrier of the cervix

Unlike the barrier presented by a contracted pelvis, this barrier of the cervix is always present, and although it is true that in physiologic labor it is readily and safely removed by the natural efforts, it is, I firmly believe, equally true that unfortunate results for both mother and child are far oftener the consequence of non-dilatation or unsatisfactory dilatation of the cervix than of obstruction offered by the bony canal Hence, the importance of the various methods for removing this barrier of the cervix either by incision or stretching, and their appropriate application

I accept it as proved that the cervical canal of one inch in length, bounded above by the internal and below by the external ring, retains its integrity until toward the end of pregnancy, the internal os remaining closed in most instances

Toward the end of pregnancy, or at the beginning of labor, the upper portion of the cervical canal begins to expand for the reception of the ovum This unfolding depends in the last days of pregnancy on the sometimes unnoticed, but often clearly marked intermittent uterine contractions, increasing the intrauterine pressure and the resistance which the uterine walls offer to the increasing growth of the ovum, so that the presenting part of the amniotic sac is forced into the os internum Hence it is that we usually find an earlier expanding of the internal os in the primigravida, in whom the intrauterine pressure is greater than in the multigravida, and in the latter in overdistension from hydramnios and twins

The relative cervical changes in primigravidæ and multigravidæ are interesting from a clinical standpoint Although the intermittent uterine contractions are less frequent in the primigravidæ, the tension of the lower

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* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association at the Fifty-seventh Annual Session June 1906

uterine segment is greater In the multigravidæ the tension in the lower uterine segment is less than in the primigravidæ and, therefore, pressure is not so readily communicated to the margin of the upper orifice and wall of the cervical canal When it is communicated, dilatation of the entire cervical canal readily follows, while in the primigravida, on the other hand, dilatation of the upper cervical canal first occurs, the more distant lower portion, namely, the external os, remaining unaffected

So it happens in a primigravida that the upper cervical canal is usually expanded for the reception of the ovum some time before labor, and this is less often the case in the multigravida under ordinary circumstances In the latter in abnormal instances, as in overdistension from twins and hydramnios, the unfolding up to the upper portion of the cervical canal is most clearly demonstrated and almost complete

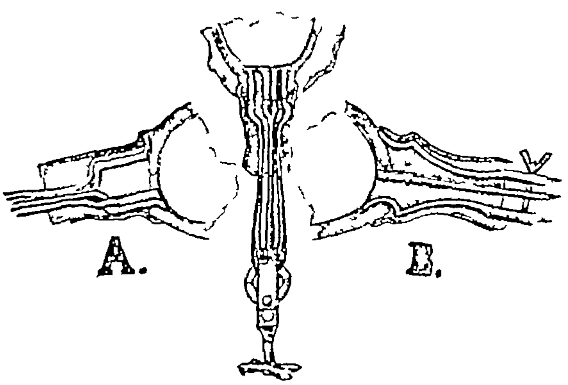

Fig 1—Bossi dilator in position in a partially dilated cervix. A. B shows slipping of the terminals of steel dilators from the ring of cervix when dilatation is nearly completed

Softening of the cervical connective tissues begins early in pregnancy at the external os and progresses steadily upward, the upper cervical zone being the last affected This softening is the result of the lymphatic and venous stasis caused by pressure from above, and is a serous infiltration in the lymphatic interspaces The essential connective tissue elements being thus deprived of their cohesive force which originally held them together, offer but little resistance to the progress of dilatation and delivery in the last third of gestation Thus we see that, while the natural processes of dilating the muscular structures of the cervical sphincter work from above downward softening of the connective tissue takes place from below upward

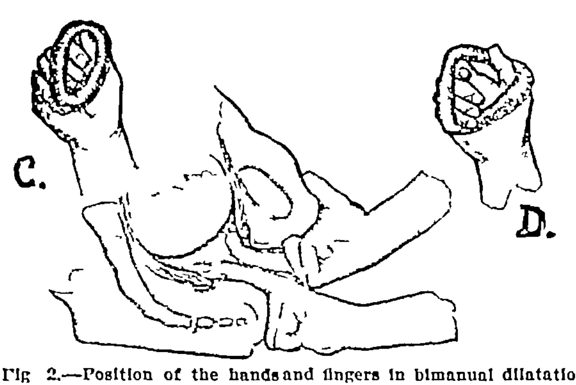

Fig 2.—Position of the hands and fingers in bimanual dilatation of the cervix. C. D unimanual dilatation of the cervix.

THE BARRIER OF THE CERVIX IN EARLY AND LATE ABORTIONS

In the first two-thirds of gestation no lower uterine segment forms and very little change in the cervical sphincter is found, with the exception of some softening of the lower portion

On the occurrence of labor at this time in a primipara the ovum is first arrested by the internal os and, after the resistance of the latter is overcome, passes into the cervical canal which becomes distended and funnel-shaped (cervical abortion) The external os, however, in primiparæ, still offers considerable resistance, and the ovum may remain in the cervical canal for a long period In a multipara, on the other hand, under ordinary normal conditions, the external os offers no resistance, since it has been dilated by previous deliveries and after its resistance has been overcome the ovum, if entire, is easily and quickly expelled

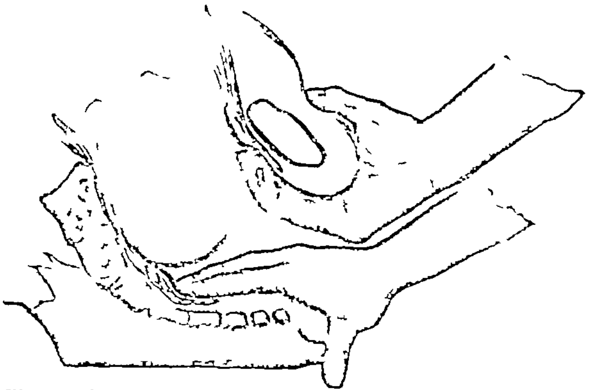

Fig 3—Bimanual dilatation of the cervix Shows dilatation complete and paralyzing the ring of the os

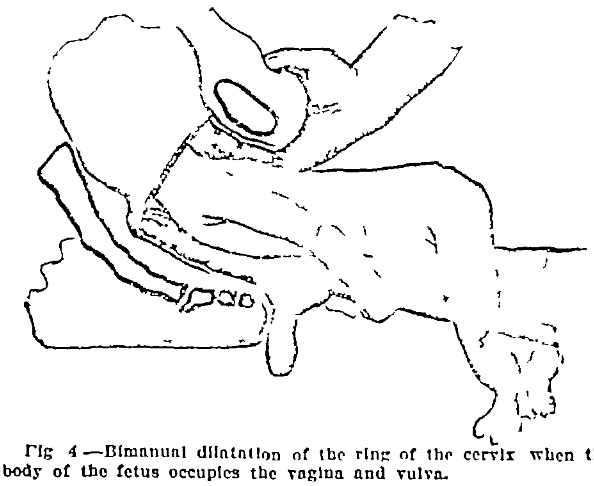

Fig 4—Bimanual dilatation of the ring of the cervix when the body of the fetus occupies the vagina and vulva.

In abnormal rigidity in a multipara from chronic metritis and connective tissue development the internal os offers marked resistance In such cases, according to Bayer, a lower uterine segment and cervical dilatation process forms as in normal labor at term

THE BARRIER OF THE CERVIX IN PREMATURE AND FULL-TERM DELIVERY

Expanding of the upper portion of the cervical sphincter in primigravidæ and dilatation of the whole canal in multigravidæ and the progressive softening from below upward in both take place in the last month of gestation, often earlier in the multigravidæ, so that every week, every day, as we recede from the preparatory stage and the actual onset of labor itself the difficulties of any method of rapid artificial stretching of the cervical sphincter increase

Because of so many and varied anatomic conditions of the pregnant and parturient cervix, each and every method of artificial cervical dilatation has its place to meet these conditions The uterine and cervical tampon, the uterine bougie, graduated hard dilators, branched steel dilators, hydrostatic bags, superficial and deep cervical incisions and vaginal Cesarean section, are all applicable in appropriate instances, to meet varying indications

When one hears a sweeping condemnation of this or that method of cervical dilatation, as with steel dilators of the Bossi type, or by vaginal Cesarean section, it is fairly certain that the one making such a statement fails to appreciate the varying cervical conditions and the value of these procedures, or has not had sufficient experience with them Such a one, with equal justice, might claim that because he has always used a knife for cutting purposes and found it convenient as far as his experience went he has no use for scissors Our attitude toward new methods of treatment should be to try them all and adopt the best.

Broadly speaking, the whole cervix can be regarded as a species of sphincter, whose sphincteric action is opposed by the influence of the other muscular layers of the uterus By the increased intrauterine pressure by the intermittent uterine contractions in the last weeks of gestation in the preparatory stage of labor and the beginning of actual labor, the cervical sphincter is weakened and broken and the supravaginal portion is expanded for the reception of the ovum in primigravidæ and dilated along its whole length in multigravidæ, and finally in labor drawn up into the walls of the lower uterine segment and finally disappears into what has been termed the "region of the internal os" The softening of the cervix progressively increases from below upward in both instances

With these premises we can make the statement that artificial removal of the barrier of the cervix can be accomplished in three ways, namely 1, By stimulating the contractions of the uterus and increasing intrauterine pressure by the introduction of foreign bodies within the uterus, as the uterine bougie, the gauze tampon or hydrostatic bags, 2, by overcoming the sphincter action of the cervix with the hand or hands or metal instruments, 3, by incision of the sphincter, as in deep cervical incisions or vaginal Cesarean section

Clinically, I am accustomed to divide my cases in which either manual or instrumental dilatation of the pregnant or parturient uterus is demanded, into those calling for, first, rapid dilatation, namely, within an hour, and, second, those in which more time is available for the removal of the cervical barrier

RAPID DILATATION OF THE CERVIX

To accomplish rapid dilatation, we have at our command to-day incision and mechanical dilatation of the cervix, the former including vaginal Cesarean section and deep cervical incisions My experience has taught me that after the thirtieth week of gestation mechanical means for the rapid dilatation of the cervix will suffice in most cases and that incision of the cervix for purposes of dilatation is rarely called for

Previous to the introduction of the Bossi type of dilator I incised a number of cervices by both superficial and deep incisions Since its introduction I have cut very few cervices I consider the Bossi dilator a valuable addition to our resources and its use justifiable along the lines in a moment to be suggested As we recede from the thirtieth week of gestation the number of cervices that can not safely be rapidly dilated by manual and instrumental means increases

In my experience bimanual stretching of the cervical sphincter for rapid delivery has given the best results While I only called attention to this method in November, 1896, the hospital records of my cases show that I have been dilating the cervix by the bimanual method in cases of eclampsia, placenta prævia and delayed labor since 1892 I have every confidence in the efficacy and safety of bimanual stretching of the cervical ring as a means of dilatation when carefully and skilfully performed Further, my experience leads me to advocate strongly the use of the two hands for cervical dilatation along the lines already suggested

It is a significant fact that in my sixteen years' experience in five maternity hospitals I have yet to meet an interne who, having tried the two methods of cervical dilatation, namely, with one and with two hands, did not finally adopt the method requiring the use of the fingers of both hands, and for the following reasons 1 The bimanual method is a closer imitation of the natural process than any other method of manual dilatation, being in this respect analogous to the bag of membranes or the hydrostatic bag, because the force used for dilating the cervical ring is directed from above downward (Fig 2) 2 Far greater force can be brought to bear on the cervical ring, if need be, by the bimanual method than by any other, because the fingers of both hands are brought into play and the stronger flexor muscles of the fingers and hand are the ones made use of 3 There is no danger of prematurely rupturing the membranes, as there is when the fingers of one hand are passed through the cervix 4 There is no interference with the original presentation or position, since the finger ends closely hug the lateral uterine wall, this can not be said of any other manual method of dilatation, nor even of hydrostatic bags 5 The bimanual method is far less fatiguing than any other method, because the strain is distributed in both hands, and the sense of touch of the operator's fingers is unimpaired, as there is no constriction of the hands as there is when one hand is used 6 The amount of force exerted can be better estimated with two hands than with one, hence the danger of laceration is lessened 7 In *placenta prævia* there is less separation of the placenta with the bimanual method than with the fingers of one hand when thrust through the ring of the os (Fig 2, C and D) 8 The bimanual method can be performed while a part of the fetus, as a leg or after-coming head, already occupies the vagina This advantage applies to no other method of manual dilatation and is, in my opinion, its greatest recommendation (Fig 4)

OPERATION

My method of procedure is as follows

After the usual preparation of the patient, and placing her in the lithotomy position at the edge of the table, I pass the index finger of the left hand into the os and, hooking the distal phalanx within the internal or external os, as the case may be, I draw the whole cervix forward and a little downward against the posterior pubic wall and fix it there I then insert the right index finger along the dorsum of the left, using the latter as a guide (Fig 2) A sterile towel, drawn tightly over and stitched to the perineum and pinned to the sheet covering the table on either side, will prevent contact of the lower fingers with the anus

Where much difficulty is experienced in inserting the second finger, I immediately resort to a preliminary dilatation with the Bossi dilator, enough to allow the introducing of the two indices into the cervical canal This is so much a routine with me now that the Bossi dilator is always boiled as a preparation for delivery of eclamptic and placenta prævia cases at the Manhattan Maternity and my Bellevue service and I am accustomed to carry it with me to such cases seen in consultation I have failed to find any advantages in the two-bladed dilator of Gau that the Bossi instrument does not possess

The two index fingers being now introduced, dilatation is secured by them and successive fingers as they are introduced, by pressure in opposite directions, by a kind of eccentric massage, the fingers of opposite hands making gentle and steady pressure downward and outward in opposite directions, first, antero-posteriorly, is exerted being constantly changed so that all portions then laterally and obliquely, the points at which pressure of the cervical ring are subjected to it After the four fingers of each hand have been introduced, some little time must be spent in producing complete relaxation, effacement and paralysis of the resisting external cervical ring, so that no difficulty shall be encountered from obstruction here during the extraction of the child (Fig 3)

In the class of cases in which much resistance is encountered by reason of the non-disappearance of the supravaginal cervix and in which time does not permit the preliminary use of hydrostatic bags to excite the uterus to draw up the internal os, I have found an invaluable aid in the metal dilator of Bossi I find that ten or fifteen minutes' use of this instrument in such cases sets up uterine action and consequent drawing up of the internal os, also causes softening of both rings of the cervix and relaxes them sufficiently to permit of a subsequent safe and rapid manual dilatation (Fig 1)

I never use the Bossi dilator to complete the effacement of the cervix, as by so doing I believe we run great risk, but only as a preliminary procedure, believing the fingers to be safer and more closely imitative of Nature's method of dilatation and more under the control of the operator (Fig 1, A and B) The Bossi type of dilator is apt, after partial dilatation is obtained, to slip away from the ring of the cervix and rupture the uterus above or vagina below

SLOW DILATATION OF THE CERVIX

For slow cervical dilatation my main reliance is on the hydrostatic bag of the Champetier de Ribes type It acts by increasing intrauterine pressure and exciting uterine contractions Occasionally it fails of its purpose, but I have yet to observe an instance in which the introduction of a hydrostatic bag for several hours did not so change the cervix by causing a drawing up of the internal os and softening of the vaginal portion, as to render a subsequent bimanual dilatation a safe and easy procedure My experience has taught me that the solid uterine bougie acts in the same way, but to a less extent In my experience, also, both the hydrostatic bag and the uterine bougie act more promptly and energetically in primiparæ than in multiparæ probably because of the greater intrauterine pressure in the former Because of this action of the hydrostatic bag and bougie of exciting the changes in the cervix favorably for a subsequent manual or instrumental dilatation I am accustomed to employ them often, as preparatory means, when necessary, and then dilate the cervix, the patient being anesthetized, bimanually, and either deliver artificially or leave the case for spontaneous expulsion

50 East Thirty fourth Street

DISCUSSION

ON PAPERS OF DRS EDGAR AND NEWELL.

Dr. Philander Harris Paterson, N J, stated that every obstetrician should be capable of manually dilating the cervix by one method or another in the later months of pregnancy The method which he has employed necessitates the introduction of the entire hand into the vagina If the vagina is too small to admit the hand, or if the child is so engaged in the pelvis that there is not sufficient room in the vagina for the hand the method cannot be used, furthermore the method can not be employed unless the cervix admits the index finger to the metacarpophalangeal knuckle, or can be dilated so as to thus admit the index finger When this degree of dilatation has been effected in any manner the tips of the first finger and thumb of a strong hand should be capable of exerting enough force, to carry forth the dilatation Probably few hands are strong enough to exert sufficient strain to tear the cervix until the cervical ring is enlarged sufficiently to admit three fingers and the thumb As the cervical ring enlarges, less force is required to effect dilatation

In the later stages of dilatation, he said, when four fingers and the thumb are introduceable, a strong hand is capable of lacerating most uteri Many uteri have been uselessly torn by the hand in the finishing stages of dilatation Dr Harris has unintentionally effected such lacerations He ordinarily dilates the cervix to a circumference of eleven or twelve inches, after which, if there be no osseous obstruction and the anesthetic having been withdrawn, the child is generally delivered in a very few minutes Dr Harris stated that every one should know some good method of dilating the cervix with the fingers and hand Whatever manual method may be used the task is often very fatiguing and the operator may at times greatly need the aid of an assistant to carry on the dilatation while resting his hands Dr Harris said that the instrument which he devised for dilating the cervix for parturient purposes, works admirably and while it has qualities not possessed by any other dilator, it is open to an objection which must attach to all dilators, and that is, the difficulty of knowing whether the cervical ring embraces the concavities of its terminals He has had two embarrassments neither of which were in any way of a serious character in the use of his own dilator although the concavities of its terminals are deeper and broader than those of other dilators He asked Dr Edgar to state in what particulars he considers his (Harris') dilator inferior to the dilator of Bossi

As to vaginal Cesarean section he said that there are certain conditions which undoubtedly indicate its use One of these conditions is cancer of the cervix, the other is where there is an extensive deposit of white fibrous tissue resulting from previous operations or traumatism, and in which the uterus will be found practicably undilatable Such uteri can be torn, but they can not be dilated sufficiently, and therefore constitute conditions calling for the employment of vaginal Cesarean section There are other conditions requiring resort to vaginal section, but they form a small and possibly exceptional series of cases Dr Harris does not feel that this operation should supplant dilatation, which is generally so easily possible and certain in result The non gravid cervix and the cervix which has not recently been gravid possess but little of the quality of dilatation, while the uterus which is gravid or has recently been gravid, is dilatable

When pregnancy occurs it effects certain changes in the musculature of the cervix It locks the cervical gateway of the parturient canal, but while it thus guards the threshold it prepares the gateway to open, or to be opened widely enough to permit escape of the fetal products when necessary Ordi narily, if Nature does not open the gateway, the physician may, when he thinks the patient's interests are bettter subserved, safely and surely open the cervix by exerting therein a sufficient and continued strain either with the fingers and hand, or by some well adapted instrument

Dr. G M. Boyd, Philadelphia, said that, although in his opinion the instrumental methods of dilatation and the various dilators are useful to a degree, it would be a step backward if too much stress is laid on instrumental methods Manual dilatation is serving him so satisfactorily that he wished to defend that method of slow or rapid delivery All of the instruments described will be of service to dilate the cervix to the size of a half dollar The cervix will be capable of stretching to that extent, and beyond that it will tear in many cases under the use of instruments or hands He would rather feel a tear than have an instrument make it Incisions in the cervix have sometimes been necessary in his hands, though manual dilatation has been satisfactory In almost all cases it will finally be necessary to accomplish the delivery by manual dilatation The instruments, therefore, can only begin the operation Manual dilatation requires time to accomplish delivery, but it is time judiciously spent

Dr Charles Stoltz, South Bend, Ind, had some experience with manual dilatation and considers it a most trying ordeal on the operator as well as on the patient He finds it a very exhausting procedure Recently he had a primipara, 29 years old whom he delivered of a very large monstrosity, in which the entire calvarium was absent The head, the presenting part, was therefore, not of dilating shape, and besides the axis of the child was not in harmony with the axis of the birth canal, making artificial dilatation of the cervix necessary After fifteen hours of ineffectual pains, he proceeded to do bi manual dilatation, preliminary to a podalic version He worked all night on that cervix and never before nor since has he had such a perineal tear He felt chagrined about it because he had affirmed such results inexcusable

He has used the Bossi dilator four times with the best results for complete dilatation of the cervix Once, four weeks after term, twenty four hours of ineffectual pains, in a mal presentation, once, to induce labor in a case of profound toxemia of pregnancy at term, and twice to terminate late abortions, where, in each case, the fetus had been dead for some time in an inert uterus His method of using the dilator is as follows Insert it, put the cervix on the stretch with the screw, then pass a finger or fingers in between the blades, using the knuckle on the limbs of the instrument as a fulcrum, thus doing the dilating with the fingers just as in manual dilatation He stretches every segment of the cervix with his fingers, using the screw just merely to take up the slack, then proceeds as before, time after time, until complete dilatation is made A sterile gauze sponge may be wrapped around the back of the hand to modify pressure on the knuckle. By adopting this plan dilatation can be effected rapidly and effectually

Dr Chas J Hastings, *Toronto, Canada, thinks that* there is not so much dependent on the method of dilatation, whether it is instrumental or manual, as on the person who dilates One can readily understand that the method one is most familiar with seems the best, and no doubt it is the best to him In Dr Hastings' opinion, with an instrument having a true pelvic curve, in the hands of a careful operator who will make, say a quarter turn to the minute, dilatation should be accomplished with perfect safety In regard to manual dilatation, he said that in his experience the hand, unless it is very small, in the cramped position it has to occupy, soon becomes powerless He does not see why manual dilatation should endanger the patient by infection No one should operate without gloves It is extremely important, however, to emphasize the danger of these instruments in unskilled hands The use of the obstetric forceps has been followed by disastrous results in the hands of some, while it is absolutely safe in the hands of others Regarding choice of cases, this, he said, is practically limited to eclampsia and concealed accidental hemorrhage Dilatation in placenta prævia must be extremely guarded and limited because of the enormously enlarged vessels at the placental site and the friable conditions of the tissues which readily produce uncontrollable hemorrhage

Dr Charles E Paddock, *Chicago, agreed with* Dr Hastings He recalled the advice given some years ago in a prominent text book on obstetrics, to leave the obstetric forceps at home, to be sent for when needed, that the temptation was too great, and that the instrument might be used without the necessary indications He believes this advice applies to any of the metal instruments used for the dilation of the cervix. He has found but one case where he thought such an instrument might be indicated The instrument shown by Dr Newell appealed to him as one which could be used with the greatest safety and efficiency As to lubricants, he has found the natural secretions sufficient, without resorting to other means

Prof A. Dührssen, Berlin, Germany, said that Olshausen had with the use of the Bossi dilator in eclampsia a mortality of 37 per cent, and Bumm, of Berlin, had in 70 cases of eclampsia, with the use of vaginal Cesarean section, only two deaths Therefore, he repudiates the Bossi method entirely In cases of closed cervix it is dangerous, and the dilatation of the supravaginal part of the cervix is unnecessary, and, furthermore, delivery can be performed by deep cervical incision or by vaginal Cesarean section. The Bossi method invariably leads to tears Cases are reported where after the use of the Bossi, the patient ruptured her uterus in a subsequent labor Dr Dührssen was pleased to hear Dr Harris say that there are cases in which no method of manual dilatation is possible Manual dilatation is also impossible in cases of rigid cervix. There is a lack of elastic fibers in the cervix, since these cases can not be dilated, and the most dangerous tears usually follow attempts at dilatation In these cases it is only possible to dilate through incision This operation is now no longer confined to hospitals If there is a skilful specialist he can do it just as well at home It is necessary to be a skilful operator to perform a proper vaginal Cesarean section Dr Newell said that it is possible for the incision in vaginal Cesarean section to tear further, but this does not occur if the incision is properly made.

Prof A von Rosthorn, Heidelberg, Germany, said that the obstetricians of Germany are divided into two groups, one emphasizes incision, the other recommends dilatation The Germans are more in favor of the incision method, for then one knows what he is doing, and it is surgical All these things must be done carefully When von Rosthorn did his first incision of the cervix, he was astonished how quickly it was done and how simple it was He made the incision in the anterior wall only to the internal os, and was able to remove a small child easily with the forceps The operation lasted only a few moments He prefers the incision method, especially where the work must be done quickly When there is time, the balloon method can be used

Dr W E Boardman, Boston, favors manual dilatation, although he admits that in the hands of a skilful operator, instruments can be used with comparative safety But speaking not only to the skilful surgeon, but also for the benefit of the *general practitioner*, he objects to putting into his hands an instrument capable of doing so much harm No instrument can have the intelligence of the human hand The aseptic and antiseptic methods of the present day give assurance to the operator, so that the use of the instrument may not be attended with many of the dangers that formerly accompanied it. With gloves perfect asepsis exists

Dr J H Carstens, Detroit, said that Dührssen's operation is not a difficult one After separating the bladder from the uterus, an incision of about two inches is made, without opening the peritoneum Through this opening a fetus can be delivered in a few moments. By keeping near the median line of the uterus on account of the smallness of the vessels there, there will be very little hemorrhage, and delivery can be affected by forceps or version in two or three minutes The whole operation can be done in six or seven minutes When it is considered that this operation is only necessary in uremic convulsions, the operation of Dührssen is the only one of choice

Dr R S Yarros, Chicago, said that in most multiparæ the Harris method serves well There are certain cases especially in old primiparæ, in which the method fails entirely A number of years ago Dr Yarros had a primipara suffering from eclampsia, in which the Harris method was absolutely useless

She feels quite sure that if she had performed the Dührssen operation the patient might have been saved In two recent cases the Dührssen incision was used with very excellent results She said that it is a simple procedure, and will be found extremely useful in a certain number of cases

Dr. J C Edgar, New York, has yet to see a dilator that will not tend to slip after two-thirds dilatation had been gained. For fear that it was a personal equation, he turned the Bossi and Harris dilators over to his assistant in one case and asked him to complete a dilatation, and he had the same experience that Dr Edgar had had. The dilator of Newell, he said, is a radical advance on all the dilators, and the point is that the hand is really doing all the dilating One can not estimate the dilatation with an instrument, the hands must be used. Dr Edgar's position as regards dilatation of the cervix is that there are cervices that will resist both manual and instrumental dilatation Instances where rapid dilatation is required, in which the cervix will resist a combined operation, are very exceptional The incision of the cervix after Dührssen is valuable, he said, but when the statement is made that the incision will not extend, one must be careful how that statement is made He has made several deep incisions, and has a photograph of a uterus of one case where it could be demonstrated that four incisions were made, yet on the left side one incision extended up into the broad ligament. In making the original incision one can not tell exactly how much room is necessary for the extraction of the after coming head

Dr. F S Newell, Boston, agreed with Dr Edgar in what he said of the slipping of the terminals His idea of the best use of the dilator is to abolish the cervical rigidity More babies have been sacrificed by the hands of the operator being too tired to complete the operation than anything else, and he thinks it very important for the operator to save his hands for a difficult extraction The vaginal Cesarean section, he said, is a most excellent procedure, but he does not think it necessary in the great majority of cases The question of obstetrics being done by the general practitioner is worth consideration, but the earlier it is recognized that obstetrics is a surgical disease, the better it will be for all

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THE MEDICAL TREATMENT OF CANCER *

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For several years I have made a special study of cases of cancer, for the purpose of endeavoring to discover some of the causes, and thus to throw light on the proper method of treatment. I have reached certain well-defined conclusions in my own mind concerning this most important subject

As a preliminary to the question of treatment it will be necessary here to epitomize briefly my opinions concerning the causes of cancer

The first and probably the most powerful predisposing cause of cancer is senility, or old age, of the tissues and organs of the body An apparently formidable objection will at once be made to the above statement by citing the well-known fact that cancer is found in young persons, and is sometimes (though rarely) congenital While this is perfectly true yet it should be remembered that senility is only a comparative term Many persons are practically as old in their tissues at twenty or thirty years of age as others are at sixty The real test of old age is not the number of years a person has lived, but the retrograde metamorphosis and degradation which has taken place in the various parts of the body

When we see the arcus senilis in the eye of a patient, or note that he is suffering from fatty calcareous, arteriosclerotic or other forms of degeneration of the organs of the body, we at once know that this person practically belongs to the class of the aged, and this important fact must always be borne in mind in the treatment of such a patient This same degeneration of the tissues is often inherited, and is probably the reason why the offspring of syphilitics and tuberculous patients, and drunkards often suffer from cancer at an early age These children, there is every reason to believe, do not inherit the cancer neoplasm as such, but the resisting power of their tissues is so lessened as to form a suitable soil for its growth and propagation

The vast majority of cases of cancer then occur in persons whose tissues are undergoing degeneration either from advancing age or senile changes In women about the time of the menopause and in men of a similar age, when the duties and labors of life begin to seem to be a heavier burden than they were in youth, this disease becomes more prevalent

Another curious fact is the interesting prevalence of cancer during the last thirty years Dr Roswell Park[1] says that if the present increase of cancer in the United States continues from 1899 to 1909 there will be more deaths from cancer than from consumption, smallpox and typhoid fever combined

Cancer is also increasing in England In 1898 there were 25,196 cases of cancer reported, or 902 per million of the total population The male rate was 19 6 and the female rate was 10 per cent greater than the average of the past ten years [2] In Germany the same fact is noted In 1898 there was twice as many cases of cancer relatively to the total population as there were in 1879 [3]

GEOGRAPHICAL DISTRIBUTION OF CANCER

This relative increase in the number of cases of cancer is found to exist at present in all civilized countries, and it should be noted that this is coincident with the great improvements in the diet and hygiene of the population of our great cities, as compared to their condition during past generations

I do not wish, however, to be misunderstood, or to assert that the increase of cancer is due to the improved hygiene and diet of the present generation, but I believe it to be due to the over-consumption of a particular kind of food about which I will speak more in detail hereafter

Cancer *per se* is not a disease which prevails extensively in hot climates Especially is it rare among those races inhabiting hot climates who live almost entirely or wholly on vegetable foods It is comparatively rare in tropical countries In Borneo it is unknown Dr A B Dahlgetty says that he has never seen a case of malignant disease of the *mamma* in a native of Hindostan He wonders whether the constant presence of malaria in these countries has anything to do with it He also calls attention to the want of pressure on the breasts of the Hindoo women by their thin and light clothing, and in the second place to their habit of suckling their children until the breasts are literally sucked dry Such a gland would appear less likely to undergo perverted action than a gland arrested while its function is still in full force

The inhabitants of certain parts of China, Burmah and India suffer comparatively little from cancer, and in certain localities in these countries it is very rare What is the cause of this comparative exemption? The facts would seem certainly to warrant the assertion that a diet of vegetable food is inimical to the development of cancer

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* Read before the American Therapeutic Society May 5 1906.

[1] Medical News April 1 1899 p [illegible]
[2] Philadelphia Med Jour April 21 1900 p 887
[3] Medical Record May 17 1902 p 770.

INFLUENCE OF ALCOHOL

The second predisposing cause of cancer that I would mention is the habitual use of the various forms of alcohol as an article of diet No one can deny the enormous amount of evil that is done to the individual who partakes of alcohol, and also to the community as a whole from its use as an intoxicant But there is a more insidious and more dangerous effect on the tissues of the body from smaller quantities of alcoholic drinks (when taken regularly) than is generally recognized The dilute forms of alcohol enter into the blood and thence circulate through every tissue and organ of the body

What is the effect of this? The alcohol, by powerful affinity for the water of the tissues, dehydrates and prematurely hardens them, not only this, but alcohol is a retarder of waste in the body In other words, it diminishes the metamorphosis of tissue, it hinders the separation from the tissues of the body of those effete and waste products which should be eliminated These used-up and waste matters are retained in the body, and tissue hardening and degeneration of organs are the results If we may use the simile, the fuel is ready for a spark to kindle it, and if we have a local irritation, an injury or necrosis of the living tissue, a malignant or other neoplasm may result

These remarks do not apply to the drunkard, we all know what his fate will be Many persons live daily under the influence and die from the effects of alcoholic drinks who are never suspected during their lives (except by their physicians) to have used them The daily use at meals of various "bitters," etc, is essentially nothing more than a thinly disguised tippling under the form of medication, and produces dire effects in the course of time, especially when at the same time little or no bodily exercise is taken

INFLUENCE OF DIET

The third and most important predisposing cause of all we believe to be the consumption of too much meat and nitrogenized food If we consider the uses of meat as an article of diet, we will speedily see that it is taken to supply the waste of the muscles and other nitrogenous tissues of the body In persons living inactive lives the consumption of bodily tissues is at a minimum, and hence they need very little meat or nitrogenous food If these same persons are habitual consumers of alcoholic drinks, even in small quantities, their power of assimilating meat is still further decreased

In fact as persons advance toward the close of life their needs for food, and especially for the nitrogenous parts of it are lessened, and the amount of food given to such persons should be diminished

Sir Henry Thompson, who is now past 83, says that in old age we ought to diminish the amount of food taken, he further says that half of our ills in old age are due to overfeeding He also advises and has practiced in his own person the total giving-up in later years the use of alcoholic drinks[4] In persons who consume large amounts of nitrogenous food, and even when they are habitual users of alcohol the frequency of cancer is greatly diminished when their avocations require them to take a great deal of exercise or when they perform hard manual labor In 50 years of continuous practice I have seen very few cases of cancer (with the exception of lip or tobacco cancer) occurring among men who labor in the open air The reason, no doubt is that the waste materials produced in the body are burnt up by hard manual exercise

Whatever theory we may adopt as to the causation of cancer, there are two facts of history that seem to be now generally admitted The first of these is that it is probably always local in its early stages, and the second is that its origin is due to some injury or local irritation of the parts affected

SUMMARY OF CAUSES

Finally, I wish to summarize, by giving the following facts, which seem to me to express the history of the causation of cancer

1 Cancer is a disease of senility or decay of the tissues, or at least occurs at the time when the retrograde metamorphosis of the tissues is taking place

2 Cancer is comparatively rare in hot climates, and especially where the diet of the inhabitants is composed chiefly of rice, or other starchy food

3 Cancer is very prevalent at the present time wherever animal food is largely consumed, the number of cases of cancer has been found to increase in proportion to the increase in the consumption of nitrogenous or animal foods

4 The theory of Dr Gaylord that cancer is caused by a protozoon or animal micro-organism seems to be disproved by later investigations, and the probability is that cancer is simply erring epithelium which has taken an abnormal growth and development[5]

TREATMENT

Believing, as we do, that cancer is simply an error of cell development depending on the retention of waste matter in the system, the treatment of cases of cancer may be divided into two classes, namely, the preventive and curative

The preventive treatment of cancer has been largely ignored by medical men, and yet if the above views of the causes of cancer are correct, it is of overwhelming importance

Cases of cancer then should be diagnosed and treated at the earliest possible moment

The most potent cause of the failure of our treatment of cancer is the neglect of the patient to apply to the physician for treatment until the disease has become so far advanced as to render the case hopeless How often do women from mistaken feelings of delicacy hide from their physicians the growth in the breast, or the sanious or bloody discharge from the uterus, which are the warnings of the danger to the health and life of the *patient*

There are at least two distinct types or classes of patients suffering from cancer who require and can be benefited by our medical counsel

These varieties of cancer are radically different in their causation and require very different treatment

The first is the anemic variety These patients come to the physician weak, pale and bloodless and often suffering from chronic leucorrhea or other uterine disorders

What will the physician do with such patients as these?

He will, of course, give them iron in large and rapidly increasing doses, give them, in fact, as much iron in the form of Vallet's mass (ferrous carbonate) tincture of the chlorid of iron or Blaud's pills as their stomach will assimilate

He will examine carefully the condition of the reproductive organs and so far as possible will correct whatever there is amiss If he succeeds in bringing back to the cheek the bloom of health by his treatment, he will eliminate to a great extent the possible danger from cancer The diet should consist of the various forms of digestible and unstimulating vegetable foods Alcohol, as a food, should be entirely eliminated, and meats and other nitrogenous foods should be reduced to a minimum amount

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[4] The Journal A M A, Nov 23 1901 p 1402.

[5] For further proof of this see article published in the Jour of Med Research Boston April 1902

Careful attention should be given to the regular action of the bowels, which should take place at least once each day The urinary secretion should be examined and proper means adopted to correct any disorder or diseased condition of the kidneys

To epitomize the treatment of the cases of cancer, it should simply be the effort of physicians to endeavor to bring their cancerous patients into the highest condition of personal health and excellence of hygiene

The second and very different type of cancer we would like to name the plethoric type

These women come to the physician often suffering very little except from a slight sanious discharge, which seems to them so trivial that it is hard for them to think that they require any medical attention. They are generally indolent, stout, well-nourished and consume an abundance of food In fact, they consume too much animal food As they consume more food than the body needs, the waste nitrogenous matter accumulates in the system and they suffer accordingly Suffering, as they do, from an over-plus of nourishment, they require purgatives, starvation and enforced exercise

These young women, when they first appear in the rôle of patients, think very lightly of their symptoms, but finally to their horror, the fatal diagnosis of cancer is made and they are rudely awakened from their dream of security

CONCLUSION

Finally, I wish to state, that it is perfectly astonishing and lamentable to see the apparent helplessness of most of the members of our profession, when confronted with the cases of cancer

Generally, no attempt is made by the physicians to treat these patients by medication, or to improve their hygiene, and the whole treatment seems to be confined to the knife, the *x*-rays, or some form of electricity

Valuable as these agents are in the treatment of cases of cancer yet it is my firm belief that our success in these cases would be far greater, if we would combine with them appropriate medical treatment Each case must be studied individually and treated accordingly

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ROENTGENIZATION IN THE TREATMENT OF CANCER

WITH AN EXHIBITION OF CASES IN WHICH THE EVIDENCES OF MALIGNANT DISEASE HAVE DISAPPEARED UNDER ROENTGEN RADIATION *

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One of the burning questions before the medical profession to-day is "How shall we treat our cancer cases?" The first thought that responds is "With ablative surgery," the second brings before us the disheartening proportion of hopeless recurrences that follows such management and which varies from 60 to 80 per cent in different hospitals, the third invokes the Roentgen ray, the fourth, destruction of the affected tissues by caustic pastes, and the fifth destructive sterilization of such tissues by massive mercuric cataphoresis

Of the last-mentioned, not enough is generally known as yet to render possible the formation of reliable conclusions, but the results obtained by the father of this method, Dr G B Massey, Philadelphia, and by a few others, are such as to give ground for the belief that it is destined to play a not unimportant part in the future management of malignant disease Caustic pastes are rationally applicable only to superficial processes, and failures and recurrences are by no means uncommon This narrows down the choice of procedures in the vast majority of these cases to employment of the knife or the Roentgen ray, or a combination of both

The possibilities and limitations of ablative surgery in cancer have been pretty thoroughly determined and are very generally recognized and admitted, those of the Roentgen ray are fairly well understood and generally admitted among properly qualified Roentgenotherapeutists, but the rest of the profession are very much in the dark as regards this agent and it is of the utmost importance to sufferers from this disease that knowledge of the subject should be widely disseminated

To attempt such dissemination by word of mouth alone, however, involves such a strain on the credulity of those not familiar with the subject that I shall precede my statements to-day by an ocular demonstration of the results which have been attained on a few patients who have undergone Roentgenization for cancer during the past four years Results speak for themselves and one undeniably positive result speaks louder and more significantly than a dozen negative ones

CASES

Case 1—Patient was a farmer, aged 55 Several members of his family had had cancer

History—About 8 years ago he first noticed a small scab on the side of his nose opposite the inner canthus It increased in size and ulcerated Various remedies had no effect on it and when he first consulted me, Feb 12, 1903, it was three eighths of an inch in diameter, deeply ulcerated with raised, indurated edges, and discharging profusely

Treatment—From this time until April 4, a period of two months, he received 18 Roentgen ray applications with complete healing as a result. There has been no recurrence and no treatment of any kind applied to the part since The cosmetic result is perfect

Case 2—A man, aged 66, farmer by occupation, whose mother, aunt, and one sister suffered from cancer

History—About 5½ years ago he noticed a small brown spot on his left temple which was accompanied by itching, gradually grew larger and finally ulcerated He consulted a physician, who recommended the use of a caustic plaster, the application of which was not followed by any beneficial result. The lesion continued to increase in size and the pain in severity, and he finally consulted a surgeon who told him that the case was inoperable.

Treatment—He consulted me first on April 29, 1902 about a year and a half after having first noticed the growth it was then the size of a silver twenty five cent piece with raised, indurated edges From this date to June 30 a period of two months, he was Roentgenized 20 times with complete disappearance of the lesion as a result This was four years ago lacking one month There has been no recurrence and he has had no treatment of any sort since The cosmetic effect is irreproachable

Case 3—A man aged 60 painter by occupation, with no history of cancer in his family

History—About 10 years ago he noticed an itching mole on the right side of his nose which broke down and increased in size for 3 months at which time he applied a caustic plaster which did not cause it to heal He then went to the New York Cancer Hospital where the growth was removed surgically It shortly recurred and increased in size until at the time of his consultation with me it was the size of a twenty five cent piece, discharging profusely, and deeply excavated with raised, indurated edges The accompanying illustration is from a photograph taken at that time, but it does not show the depth of the ulceration, as, through a misunderstanding, the photograph was taken when the lesion was covered with a scab

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* Read with exhibition of patients at the one hundred and fourteenth annual convention of the Connecticut Medical Society at New Haven Conn May 24 1906

Treatment —He received his first Roentgen treatment March 10, 1903, and during the next 4 weeks was Roentgenized 8 times During this period the only change observable was that the scab formed more rapidly than before, there was slight lessening of discharge and slight redness of the healthy tissue about the lesion At this time he was forced to discontinue treatment by an attack of acute rheumatism which kept him at home for 6 weeks He then called on me again but the lesion had entirely healed during this interval and has never recurred or been treated in any way since The cosmetic result is all that could be desired, the excavated area having filled out to the level of the surrounding parts so that scarcely any depression even is visible

A peculiarly interesting feature about this case is the striking way in which it exemplifies the cumulative action of the ray Almost no change of a reparative nature was observable at the time he received his last application, but during the following 6 weeks the transformation, resulting from the treatment, developed rapidly These three patients have been well and free from recurrence between three and four years

In cases of mammary cancer it is my belief that the best interests of the majority of such patients demand immediate, radical extirpation, to be followed, in every case, by Roentgenization after the wound has healed It is but fair to state, however, that some operators, with greater experience in mammary cancer than myself, regard Roentgenization, at least in primary, localized cases, with more confidence than the knife, either alone or in conjunction with the ray Their results are such as to render the point a justly debatable one, and positively determinable only by future investigation

The last case to which I desire to call attention was reported in full by me to the Electrotherapeutical Section of the International Electrical Congress at St Louis, in September, 1904, and constitutes, so far as I have been able to ascertain, the most remarkable exemplication of the curative power which the Roentgen ray exercises over malignant disease thus far observed Certainly no case so striking has been reported

Case 4 —A school teacher, aged 39, on whom hysterectomy and ovariotomy were done 8 years ago for what was supposed to be a fibroid tumor of the uterus, no microscopic examination was made

History —About 2½ years after this operation she noticed a hard tumor in the lower abdominal wall in the region of the cicatrix. There was no pain and no discomfort but rapid growth

She consulted Dr Maurice H. Richardson, of Boston, who referred her to Dr W B Coley of New York, for treatment by the erysipelas toxins During the next 10 months she was treated with the toxins which caused the growth to decrease in size during the earlier part of this period, but they then lost their power and at the end of this time, in January, 1902, when she was referred to me by Dr C A Bevan of West Haven, the mass measured 10 inches from side to side at the level of the anterior superior spines of the ilia, 8 inches vertically in the median line, and about 5 inches antero posteriorly in the median line Microscopic examination of sections removed from the tumor while she was under Dr Coley's care demonstrated it to be a fibrosarcoma and the mass was rapidly increasing in size The patient was losing flesh, markedly cachectic, very weak, and complained bitterly of pressure symptoms

Treatment —Roentgenization was begun Jan 28, 1902, and during the next 4 months she received 46 applications Her general condition commenced to improve at once but the tumor itself had increased somewhat on the right side, but decreased slightly on the left side, on the whole, the tumor was slightly larger at this time than it had been when we started, and the only feature about the case that encouraged me to continue the treatment was the marked improvement in her general condition

She then went to her home in Massachusetts for a short visit and when she returned a decrease in the size of the tumor of about 20 per cent was noticed and made it necessary for her to shorten her waist bands and the fronts of her skirts to keep them from dragging on the ground

From June 17 to September 3, a period of 2½ months, she received 31 Roentgenizations Her general health continued to improve and the tumor steadily decreased in size and at the end of this period she resumed her occupation of teaching school, which had been interrupted for about a year and a half

To make a long story short, the whole treatment of this case extended over a total period of two years and three months, during which time she received 136 applications of the Roentgen ray, more than half of which were given during the first 8 months She received her last Roentgenization May 20, 1904, at which time no trace of the tumor was discoverable, nor had it been, according to the testimony of her family physician, for several weeks previously The fact of its disappearance at this time was confirmed by examination by Dr C A. Bevan, West Haven, and in July by Dr W B Coley, New York, so that this patient has been perfectly well without any evidence of recurrence for more than two years At the present time she weighs more than she has ever weighed in her life before, is apparently perfectly well in every way, and has taught school uninterruptedly since September, 1902

BENEFITS OF ROENTGENOTHERAPY

These cases justify the bald statement that cancerous processes are amenable to Roentgenotherapy, whether superficially or deeply located, and that it is capable of accomplishing beneficial results in cases of so severe a type as to present absolutely no hope even of relief under any other management It must not be understood, however, that all cases of malignant disease will respond happily or with equal readiness, even when the highest degree of technical skill and the dictates of the ripest experience are invoked in the administration Individual idiosyncrasy, as regards protoplasmic vitality and the strength of the tendency toward the normal development of cell types constitutionally inherent in different patients, enters the problem with great force In some persons cell vitality is at so low an ebb that but little disturbance is required to produce a widespread aberration from the normal cell types, in others it is so pronounced that very large degrees of such irritation as usually induces malignant cell growth, are undergone with impunity These same principles apply as regards the amount of corrective influence required to restore normal conditions in any individual case But the cardinal fact that the beneficent power is inherent in the ray remains demonstrated and it is our future function to ascertain, if possible, gain control of those extraneous factors and conditions which introduce the element of uncertainty into the treatment of the individual case Roentgenization appears, then, to be destined for a prominent rôle in the therapy of cancer

ROENTGENOTHERAPY AND SURGERY

The next thing to be ascertained, viz, definition of that rôle, at once brings up for consideration the question, "Shall the ray be relied on alone, to the exclusion of the knife, or shall it be applied in conjunction therewith, and if so, how?"

As regards the first part of the question, clinical experience has shown that it is justifiable, and usually preferable in judiciously selected cases, to rely on Roentgenization to the exclusion of the knife in cases of superficial epitheliomata involving only the external skin The proportion of successful results is just as large (some operators claim that it is larger) as that attainable with the knife or caustic pastes, the cure is just as radical, and the cosmetic results are much better An additional advantage is that if recurrence takes place it is usually permanently amenable to a further course of radiation, whereby the extensive removal of tissue is avoided I will say, in passing, that malignant processes involving mucous membranes do not respond as kindly to Roentgenization as do those which are confined to the external skin In inoperable cases, wherever situated, Roentgenization must of necessity be relied on to the exclusion of the knife That it merits consideration in even the most desperate of these, however, is demonstrated by the abdominal case already described

As regards the second part of the question, clinical experience has shown that when the growth is deeply located or large in size, a much larger proportion of satisfactory results can be obtained by combining the knife and the ray than by relying on either alone. The logic of this proposition is as follows When a large mass of malignant tissue disappears under Roentgenization, its disappearance is usually accompanied by a variable degree of general systemic toxemia which has been known to be severe enough to kill the patient of itself, and which is always liable to impair general or local metabolism sufficiently to interfere greatly with, and sometimes entirely to defeat, the restoration of normal conditions Its removal by the knife, *en masse*, eliminates this danger 2 When the disease process is deeply located, the intensity of the influence which it is possible to exert on the lesion, is so lessened by the passage of the ray through the overlying tissues as seriously to impair its remedial effect Removal of the lesion by the knife confines the work demanded of the ray to the destruction of microscopic, outlying foci of malignancy, whereby the probability of a favorable outcome is greatly enhanced.

Whether or not a cutting operation for cancer should be preceded by Roentgenization is still a mooted point. In its favor is the probability that limitation of the process can be effected through inhibition of the growth of malignant cells at its periphery, thereby increasing the probability that complete removal can be attained On the other hand, grave impairment of the reparative functions of parts thus treated has been noted, and the loss of time involved in delaying the operation may at times be a serious matter There is so little unimpeachable evidence that well-applied Roentgenization has ever been instrumental in actively disseminating a malignant process, and so much in opposition to this theory, that this part of the subject is hardly considered to merit discussion among present-day Roentgenotherapeutists and we can dismiss the subject without further mention As regards pre-operative radiation, therefore, the conditions surrounding each individual case must determine its management

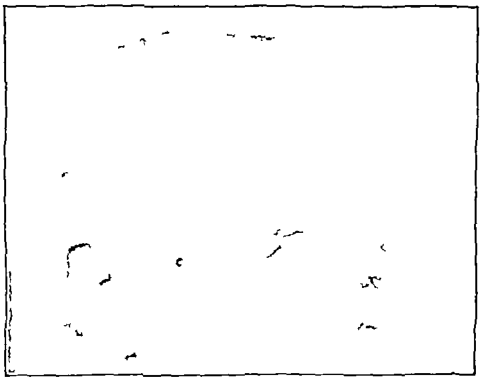
Roentgen operators are unanimous, however, in the belief that every ablation for cancer should be immediately followed by Roentgenization, as a routine measure, which belief is based on the following

1 A large proportion of recurrent malignant growths does not respond kindly to Roentgenization, perhaps because of the increased malignancy with which operative interference seems to imbue some cancers, notably sarcomas

2 If Roentgenization is delayed until recurrence is manifest, the process may then have become so widely disseminated as to preclude the possibility of benefit from radiation

3 If the affected area is radiated immediately after radical extirpation of the lesion, the degree of remedial (destructive?) influence demanded of the ray will be limited to such as will be necessary for the elimination of microscopic foci of malignancy, whereas if recurrence is awaited, the remedial influence required will be much greater because the lesions will be much larger and better developed, and the degree of increase demanded may be so great, especially when deeply-located structures are involved, as to be impossible of attainment Under such circumstances we would be confronted with a condition which might have been eradicated had we acted promptly, but which our omission had allowed insidiously to develop and compass the destruction of the patient

4 We know that in a certain proportion of cases treated by a cutting operation alone, recurrence will not take place and the cure will be radical On the other hand, we also know that we never can assure any one patient that recurrence will not take place in his case, and we are perfectly certain that recurrence will declare itself in a large proportion of all cases If immediate post-operative Roentgenization is omitted in any one case, that may be the very one in which we shall encounter recurrence and it is highly probable that had we applied the ray immediately after the operation the accident would have been prevented By Roentgenizing every operative case we are assured of having exerted every effort for the relief of the patient, and that we have saved all of our patients that it was possible to save



CASE 3 —Before treatment

5 It is imperatively incumbent on us to apply any measure which has the power to destroy or inhibit malignancy, to the task of lessening the proportion of post-operative recurrences, that the Roentgen ray manifests such a power is proved beyond a doubt, and the clinical experience of those who have thus employed it, with a correct technic, has amply confirmed the validity of this contention

The consensus of expert opinion to-day, then, may be broadly summarized as follows

1 In superficial malignant lesions involving only the integument, Roentgenization is the procedure of election, 2 in operable lesions more deeply located or involving mucous membranes, the advisability of combining ablative surgery and Roentgenization should always

be earnestly considered, and such combination will give the best results in the majority of cases, 3 a course of Roentgen ray applications should follow every cutting operation for malignant disease, as a routine measure, and sometimes, perhaps, should also precede the operation, 4 Roentgenization should be persistently applied to all inoperable cases as long as the patient shows any signs of response, however slight

IMPORTANCE OF TECHNIC

By far the most important factor which is active to-day in determining whether the results of Roentgenization shall be satisfactory or the reverse, is the degree of knowledge possessed by the operator concerning Roentgen ray phenomena, both physical and clinical, and his ability to utilize this knowledge practically, in other words, the technic The difference between the results of intelligent, scientific, efficient Roentgenotherapeutic technic and the reverse resembles very closely that which would obtain between appendectomies performed in a tenement-house kitchen without antiseptic precautions by a second-year medical student and the same operation performed in a well-equipped hospital by a master of surgery The subject of technic is too specialized in character to admit of discussion in detail at this time, and I shall not enter into it further than to call attention to the following facts which have more or less vital bearing thereon

1 There are electric conditions generated in the neighborhood of an excited Crookes tube, and perhaps other radiations than those of Roentgen emanating therefrom, which probably play a considerable part in the physiologic influence exerted

2 The Roentgen radiation from any Crookes tube, whether of high or low vacuum, is composed of rays of varying degrees of penetrative power present in varying proportions as regards quantity

3 Only those rays which are absorbed by the tissues, i e, reach but do not penetrate through them, effect physiologic modification thereof Hence an operator must know which rays are best adapted to the particular pathologic condition under treatment and be able so to manipulate the generating apparatus as to obtain them

4 The penetration of the Roentgen radiance generated by a given Crookes tube is directly modifiable by the amount of current used to excite it and by the introduction of resistance (spark-gap) into the tube circuit This latter factor is especially effective when a static machine is employed as the tube excitant, so much so, indeed, that a tube so low in vacuum that it gives off no appreciable Roentgen radiance at all without spark-gaps, can be made to deliver rays of high penerating power by their use

5 Rays of different degrees of penetrating power can be filtered out of the emanation from an excited Crookes tube by placing in its path various substances such as sole leather, plain or impregnated with normal salt solution when it is desired to eliminate those rays that are absorbable by the skin, aluminum when it is desired to eliminate the so-called "soft" rays in general, silver when the rays of high penetration constitute an undesirable factor, etc

6 Volume, as well as penetrative power constitutes an important element in the physiologic influence and therapeutic efficiency of this force

7 Volume is directly proportional to the amount of current traversing the tube and indirectly proportional to the degree of tube vacuum

8 The intensity of the x-ray varies inversely as the square of the distance, hence, the location of the source of the rays (anode) as regards its distance from the lesion and determination of the time duration of the exposure are factors of the first importance Fortunately these can be calculated mathematically and are easy to ascertain, unfortunately they are as much neglected by the average exponent of Roentgenotherapy as they are easy of attainment

9 It is necessary that the quality and quantity of the rays therapeutically administered should be under intelligent control and susceptible of measurement, and here we are confronted with a grave difficulty The penetrating power can be satisfactorily determined by Benoist's penetrameter and Pfahler's modification of this instrument[1] has rendered it entirely safe as far as injury to the operator is concerned, but no practical instrument has yet been devised which will measure ray volume or quantity with any degree of accuracy, and volume is of as much importance in this equation as penetrating power The operator is, therefore, obliged to rely on his experience with his own individual tubes for his estimate of their physiologic and therapeutic efficiency, this knowledge of one tube is of no value as regards determination of the index of any other, and every tube is an unmodified interrogation point to any radiologist who has not used it before

CONCLUSIONS

From the foregoing it is apparent that, although a man may be an excellent surgeon or an erudite physician, these qualifications of themselves do not by any means constitute him a competent Roentgenotherapeutist or justify him in wholesale condemnation of this remedial measure because of unfortunate results or a lack of good results which may have come under his observation from Roentgenization as it is commonly applied to-day The attainment of satisfactory results necessitates on the part of the operator a good knowledge of the physical properties of the ray, a broad and comprehensive familiarity with its clinical behavior, and an intimate knowledge of the possibilities and behavior of his individual tubes and generating apparatus These qualifications are, unfortunately exhibited by but few of those who are Roentgenizing pathologic conditions to-day, a generous estimate placing their number in the United States at about 50, and it is a matter of wonder that there are so many happy results and so few accidents It is also not to be wondered at that the vast majority of surgeon-radiologists are much better surgeons than radiologists, but this unfortunate fact is responsible for a very large proportion of the sweepingly pessimistic reports of cases from high sources that have been ineffectually Roentgenized

Due appreciation of these facts is gradually permeating the general professional mind, however, and inducing Roentgen operators to fit themselves properly by conscientious, special study for their work, and the time is not far distant when the beneficent potentialities of this remedial agent will be accorded the high rank they deserve in the management of this most distressing and destructive ailment

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[1] Archives of Physiological Therapy June 1906

Doctor and Automobile—Almost before the general public believed that the automobile was more than a passing craze physicians were buying cars and proving that even in its early, crude state it was of immense advantage to them in the pursuit of their professional duties—Doolittle in *The Automobile*

METHYLTHIONIN HYDROCHLORID IN INOPERABLE CANCER *

ABRAHAM JACOBI, M D
NEW YORK CITY

While the remedy of which I shall speak is not new to me, it is new to the larger part of the profession Methylene blue was introduced into practice in malignant tumors by Moorhof-Mosetig of Vienna I believe the first man who introduced it into America was Willy Meyer of New York At that time I used it a good deal by the injection method The injections are very painful and inadmissible because it is impossible to prevail on any patient to submit to them for any length of time Therefore, for fourteen or fifteen years, I have given methylene blue, or as it is now called, methylthionin hydrochlorid, in my own way internally

WHEN TO USE IT

As a rule we see cancer in an advanced state Small cancers, local cancers, will very frequently go into the hands of the surgeons where they belong and the operation is certainly the first thing to be thought of in practice, but there are a great many cases that have never been recognized and that distinctly prove inoperable for that reason, together with others that have been operated on once or twice, for instance, cancer of the breast, or intra-abdominal cancer The large majority of cases I have had in the last fourteen or fifteen years were intra-abdominal cancer of the liver, gall bladder and omentum and frequently combinations in all these organs A number of cases occur on which no surgeon would dare to operate, not even to perform laparotomy to see what is going on inside These inoperable cancers I have invariably treated with methylene blue

One case was that of a woman in whom was diagnosed a cancer of the right ovary and of the neighboring structures It was not accessible from below, it occurred fourteen or fifteen years ago I gave her methylene blue She took it a long time she was in a low state of health, the tumor was very large, she did not get well, but when she died, after years, she had an ovarian tumor and a tumor about the size of two walnuts, only They were cancer and there is no doubt that the whole tumor was cancer It was reduced, I think, by the treatment She died of her cancer, but having lived a number of years comparatively well and gaining weight, so that she was able to superintend her household Such cases I have seen in varying numbers

I believe I see a new case of cancer once a month at least Of these, 20 or 25 per cent are of the inoperable kind Some that have already been operated on can not be turned over to the surgeon again Then will come methylene blue treatment I have seen such cases in fairly great numbers They certainly count up in the course of fourteen or fifteen years I have had one woman under observation for eight or nine years She weighed 91 pounds at first observation, she was jaundiced and is jaundiced yet, and still weighs 91 pounds Once in six months she reports that she is perfectly well She is still yellow still has lumps Ordinarily she would have died seven or eight years ago

One of my patients is a business man who came to me six or seven years ago At that time he weighed 124 pounds now he weighs 146 At that time he was not able to attend to his business For the last four or five years he has attended steadily to his business day in and day out A large tumor in the epigastrium has dwindled away to about the size of a walnut He is apparently well and weighs 25 pounds more He certainly knows that he is sick and accordingly he will complain, but he goes about from morning to night

So I can say that I have a number of cases I do not think, however, that I have ever cured a case I have seen patients die during the treatment, but I have also seen them comparatively well, attending to business, living three, four, seven and eight years, and perhaps finally submit to their disease

In the last few months my attention has been directed to the large number of bodies that are favorably influenced by light, that have fluorescent qualities It appears that methylene blue belongs to that class I have commenced to expose my methylene-blue patients to the sunlight, whether it will be of any use I can not say I have exposed them in the solarium or in bed rooms, kept them there undressed hours and hours, as long as their household or business will permit them It is not impossible, it is even probable, that light will do a great deal more in connection with methylene blue than methylene blue alone I simply say I am positive that it has rendered me a great deal of good service in at least 120 or 150 cases in the course of the last fifteen years I have not gone before the profession with my results to any great extent Only now and then have I mentioned them before societies, but never to such an extent as now A number of physicians and surgeons in New York have had their attention drawn to the subject and are trying the remedy It is well tolerated

HOW TO USE IT

I give the drug in pills, in small doses, 2 grains a day, and run up slowly to 3, 4 and 6 grains a day I have heard of bigger doses being given, but I have never required larger ones I think the 2 or 4 grains should be made up in pills with a dose of three-fourths grain of extract of belladonna daily I know that the extract of belladonna will relieve the dysuria much better than nutmeg, which has been recommended for that purpose When you give 6 grains there should be three-fourths of a grain of belladonna given through the day, because adults will not bear belladonna so well as children They are easily overdosed, they get dry throats in much less time than children with comparatively large doses It is easy to give it in that way I frequently combine it with arsenous acid (arseni trioxid) The dose would be 1/40, 1/30 up to 1/20 of a grain of arsenous acid three times a day It can be made into pills with belladonna and methylene blue and there is no harm, when occasion requires, to give strychnia or extract of nux vomica in order to make up the pill so the prescription would be 2 to 4 to 6 grains of methylene blue in four doses It is best given after meals, one at bed time with perhaps 1/10 grain of strychnia and 1/10 grain or more of arsenous acid a day with or without a vegetable purgative if that be necessary

Patients should be told at once that the urine will be blue from the very beginning, that it will stain the linen and that the stains can not be removed I advise therefore, my patient to have an old handkerchief handy and to wipe off the last trace of urine Apart from that, patients will not suffer any convenience In my experience not one in twenty will complain of dysuria The belladonna appears to act very well I have recommended it [illegible] a number [illegible]perated on in order to

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* Remarks made in the Section on Pharmacology and Therapeutics of the American Medical Association at the Fifty-seventh Annual Session June 1906.

prevent relapses It is impossible to speak with mathematical certainty about the result of that, but I believe that relapses have been prevented I should recommend it in every case of cancer of the uterus that has been operated on and when relapses must be feared. I believe that I have seen less relapses since that has been done Still, an actual, statistical proof of negative experience can not be had

CONCLUSION

Because I considered the matter of too great importance to be published prematurely, I have not spoken of it extensively before I wanted to be perfectly sure about my results I wanted to have a sufficient number of cases to base my assertions on I believe I have now waited long enough I think that after fourteen or fifteen years one is entitled to speak of a subject that appears to be of great value It has done a great deal of good in my practice I have certainly restored a good many people to their work I have kept a number of people alive two, three, six and eight years longer than would have been their share

DISCUSSION

Dr H. R. Slack, La Grange, Ga., said that he had had a limited experience in the use of methylene blue in inoperable cases of cancer In 1895 a man came to him complaining of sore throat. Examination showed an alarming condition. There was evidently carcinoma of the tongue He referred him to a specialist in throat diseases in Atlanta, who pronounced it an inoperable case of cancer of the tongue The man returned about six weeks later At that time he could swallow no solids at all Dr Slack began the use of methylene blue, injecting hypodermically 1 c c. of a 2 per cent solution every other day The treatment was very painful, but was very satisfactory At the time he began treating him with methylene blue the cancer was as large as an egg It diminished rapidly in size and the man lived for three years in comparative ease Another case was that of a woman with inoperable cancer of the uterus, which involved the vagina General metastases had taken place She had hemorrhages almost daily He used methylene blue in that case and the woman lived for seven years in comparative ease, and attended to her household duties Up to three weeks before her death she did not have to use opium to soothe her pain The methylene blue relieves the shooting pain that patients complain of, and it certainly is the most satisfactory treatment for inoperable cases involving a mucous surface that he has seen *X* ray is best for external cancers

Dr W J Robinson, New York City, said that his experience with methylthionin has been limited to gonorrheal urethritis In 1895 he published an article on that subject in the *New York Medical Journal*, in which he reported a severe case of strangury and dysuria following the use of this drug, and for a long time after that he did not use it, for the effect was a very severe one He was not at all certain, however, whether the bad result was due to the methylene blue or to certain impurities in it or to a different drug substituted for it For a long time methyl violet was (inadvertently or ignorantly, not deliberately) substituted by some druggists when methylene blue was prescribed He declared that the physician should make sure that he gets a United States Pharmacopeia preparation, or, better still, that he specify a certain definite brand he knows to be all right Many dyes go under the name of methylene blue which are really not methylene blue but substances injurious to the system Some of these substances contain a good deal of arsenic and zinc.

Dr. S Solis Cohen, Philadelphia, said that he has given medicinal methylene blue in large doses, that is to say, from 5 to 10 grains frequently 15 grains, in a day, not, however, in the treatment of cancer, in which conditions its internal use is new to him. He was speaking as to the tolerance of the human organism toward the drug He has never seen strangury or dysuria or any untoward effect whatsoever Patients—chiefly cases of chronic or obstinate malaria or malarial sequelæ—having been cautioned that their urine would appear blue, have been spared any fright from this source He asked whether Dr Jacobi considered that the fluorescent effect of the methylene blue could be stimulated by *x* ray or by artificial light as well as by sunlight. He has seen good results from the method, using, however, fluorescin or esculin or quinin. He will try methylene blue with the artificial radiation also

Dr. W J Morton, New York City, said that the trouble in treating these inoperable cases is well known He thinks it wise to point out the salient idea of prolonging the lives of such patients, who are often invaluable people It is well to dwell on palliative measures as well as on the will o' the wisp seldom reached, viz., a complete and rapid cure He welcomes the position that Dr Jacobi outlined in another sense He is most interested that a man of Dr Jacobi's great and varied experience in medicine should see his way to drop the purely drug side of the remedy and turn to the physical, for instance, the nature of fluorescence. In 1902 Dr Morton published his first observations on the value of fluorescent drugs in general. He followed that publication up at the end of two years, and after a good deal of experience thought it a matter of duty to point out how important this matter of fluorescence is in the administration of medicines He believes that the effect of certain medicines is due to their fluorescence and not to any other pharmacal quality It is not absolutely known how quinin will cure malaria. May it not be due to its quality of fluorescence? In regard to the class of cases Dr Jacobi alluded to Dr Morton said that he has used methylene blue only in one instance, for at that time he drifted into the other fluorescent substances, and his next experiences were with quinin and with fluorescin and esculin The fact that many medicines owe their efficacy to their fluorescent quality was brought out first by experimenters who confined their experiments entirely to light, viz., the Finsen light and sunlight Considering that the practice might be broadened, he has been in the habit, since 1902, in all cases of cancer of saturating patients with one fluorescent substance or another, often the fluorescin, often quinin, and then submitting them to the *x* ray, to radium and to the high frequency currents He has verified what he published in The Journal A M. A, June, 1904, by administering to himself fluorescin in aqueous solution 1 to 30, 30 to 40 drops In 20 minutes this quality of fluorescence will be observed in the urine, and in case there is an open ulcer it may be observed on the dressings If such an experiment be made and the patient be taken into a dark room and good radium be used and the radium tube (which in itself has no light and is enclosed in an aluminum capsule), be placed in the web of the finger, in from eight to ten minutes any observer will be able to follow the hand by aid of the light spot produced This is an absolute proof that radium sets up fluorescence in the living being at the site of disease If Dr Jacobi would add to his methylene blue the treatment by the *x* ray and the radium, it would probably be a still further advance over his present splendid results

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NOSTRUMS AND FRAUDULENT METHODS OF EXPLOITATION *

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WASHINGTON, D C

The charge is frequently made that, in discussing the so-called "patent medicines," writers and speakers are extremely uncharitable in that they do not even attempt to differentiate between the good and the bad, but class them all under the unsavory term "nostrum," which embraces everything that pertains to charlatanism and fraud In order that there may be no misunderstanding, permit me to state at the outset that in this paper nothing will be considered except what will be denominated by the most charitably inclined as nostrums

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* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Fifty seventh Annual Session, June, 1906

* Published by permission of the Secretary of Agriculture and the Postoffice Department.

The chief transgression of nostrums lies not so much in the composition of the remedies as in the methods used for exploiting them Most of the medicines employed by nostrum venders consist of one or more drugs of recognized merit The fraudulent element lies, to a very large extent, in the mystic, misleading and deceptive advertising literature employed for exploiting them It seems that the more extravagant and exaggerated are the claims made for a remedy the better it succeeds It must, however, be stated that there are some mixtures which are considered as good "repeaters" and which depend largely for their success on the presence of some habit-forming drug

Promoters of nostrums take advantage of many features that have been or are at present prominently before the medical profession and which have been, in a measure, popularized by the lay press Purported wonderful curative virtues of radium are called into vogue, the efficacy of electricity is drawn on, the heralded value of lecithin as a brain food is not forgotten, new drugs claimed to be found in foreign lands are utilized, and even the physical laws have not escaped, as is shown by the mechanical appliances utilized for increasing the supply of blood to the generative organs by means of vacuum apparatus

Many of the remedies might be called "cure-alls," but for convenience the following classification, based on the claimed curative features, is employed

HAIR RESTORATIVES

"ANTI-KINKINES"

The mixtures represented by the above term are advertised in such papers as are circulated to a considerable extent among the colored race The claims made for them are that they will straighten or make straight kinky, knotty, curly hair, produce a luxuriant growth of hair, and make gray hair return to its original color The advertisements generally employed by these concerns usually represent the cuts of the "before" and "after" treatment, intending by so doing to give the impression that the remedy advertised produces remarkable results

"CLOSSINE"

"Clossine" is advertised by the Bruno Manufacturing Company, Boston It is an ointment, consisting for the greater part of petrolatum This remedy does not claim to take the kink out of the hair, but simply states that it will make it straight It is also represented that "Clossine" "turns gray hair dark," which was questioned when the article first came up for investigation In reply the manufacturer submitted a sample colored black, and represented that this particular form of "Clossine" was employed when it is desired to make gray hair black The mixture is the same as generally employed, the difference being only that a black dye was used instead of some other color The first sample examined was colored green, and if the same logic is followed out green hair would result when the green ointment is applied a chameleonic curiosity brought up to date

"GLOSSINE"

This remedy is advertised by the Helen Martin Toilet Company, Richmond, Va It is represented that the mixture will "restore gray hair to its former color;" also that it will make the hair "grow out on bald spots" An investigation showed that the mixture employed contained the following ingredients

Quinin Sulphate.
Resorcin.
Petrolatum
Stearic acid.
Paraffin.
Oil of citronella.
Oil of bergamot
Tr cantharis
Harmless green color

Virtually no defense was made when the above firm was confronted with the fraudulent nature of its claims While it must be admitted that some of the ingredients present in the formula are generally recognized as having some virtue in favorably influencing the growth of hair, exactly on what remedies is based the claim that it will make hair "grow out on bald spots" it is difficult to understand, and the company did not throw any light on this point, much to the sorrow and regret of many of us

"KINKINE"

The mixture employed under the above name consists of cocoanut oil and crude petrolatum, the mixture being flavored with oil of bergamot. One of the fraudulent schemes employed by this firm, which is somewhat novel for this class of remedies, is the claim that the marvelous properties possessed by the mixture were discovered by a famous English physician who, an investigation showed, was purely an imaginary individual

"OZONIZED OX MARROW"

This remedy is distributed by the Ozonized Ox Marrow Company, Chicago It is represented as a wonderful discovery and that it makes kinky hair straight. The "before" and "after" treatment pictures referred to above are very generally employed Examination shows that the composition of the preparation consists of lard beeswax, castor oil, beef marrow, gum benzoin, oils of orange, lemon, cloves, lemon grass and lemon flower The name "Ozonized Ox Marrow" itself is a fraud, because, first, it does not contain any ozone, and, second, it is impossible to ozonize such a mixture Some experiments were made to ascertain whether there was any possible basis for the claims made by this firm, which resulted in the fact that this mixture has no more virtue in causing kinky hair to assume a straightened appearance than any other ointment consisting of similar but entirely different ingredients, neither having such properties

"STRAIGHTINE"

This is manufactured by the Nelson Manufacturing Company, Richmond Va It is represented that "Straightine" makes kinky, curly hair straight and that it is unlike any of the other preparations on the market "Nelson's Straightine, the latest discovery for making Knotty, Kinky, Curly Hair Straight" The mixture employed for the purpose of accomplishing these marvelous results consists of petrolatum 90 parts, purified beef suet 10 parts, and oil of bergamot to give a suitable flavor

CONSUMPTION CURES

"EAST INDIA CONSUMPTION CURE"—DR STEVENS

The promoter is a Mr W A Noyes, Rochester, N Y The scheme employed is to advertise in local newspapers "a free treatment for consumption," giving at the same time the formula of the medicinal compound to be used with instruc [illegible] that [illegible] cri [illegible] it be filled by t [illegible] is fact and [illegible] the pr published prescription contains a number of coined names which are not familiar to the druggist, neither can he nor any one else find the same in either ordinary or extraordinary pharmaceutical literature Among these names are "Asiatic Halish Sativa," "Diosmæ" and "Cashgar" The invariable result is that the druggist is unable to comply with the request of the individual delivering the prescription, and if the party desires to secure the remedy it will be necessary to comply with the suggestion contained in the advertising literature, namely, to forward the prescription to the advertiser

It is held out in the advertising literature that the chief active ingredient of the medicine is cannabis sativa On investigating a sample of the material it was found to contain the following ingredients

Cinchona bark powdered	Rochelle salt
Ipecac.	Morphin

While a combination of the above character is useful as a medicinal remedy, there is no truth whatever in the representations and claims that it is a consumption cure It is a snare and a delusion in that it robs the unfortunate victims of valuable time which, if utilized by the proper open-air treatment, might result in the restoration of health

In this connection it might be of interest to note that the scheme employed by this firm, namely, the publishing of prescriptions containing a number of coined names which are known only to the promoter is frequently employed by unprincipled advertisers The prime object, of course, is to compel would-be patients to forward prescriptions to the office of the firm advertising same for compounding The filling in some cases requires money in advance, but frequently the prescription is filled on the most trivial pretext and sent by express c o d If the prospective patients are disinclined to pay for the package, a bluff is sent from the office that an order is filed with the firm The above scheme also in a measure discounts the local druggist in the eyes of the patient because he is led to the belief from the advertising literature that the formula is readily filled by a competent druggist This is an unjust reflection

"LUNG-GERMINE"

A remedy advertised by the Lung-Germine Company, Jackson, Mich Not one of the members of this company possesses so much as a high school education, to say nothing of medicine The claims made by this company are clearly indicated by the following quotations taken from the literature employed

> 'Consumption Cured by Lung Germine"
>
> 'Consumption and all diseases of the throat, lungs and bronchial tubes permanently cured by Lung Germine"
>
> "Permanent cure for Consumption"
>
> 'The permanent cure of Consumption"

Analysis of the sample submitted shows that it is simply an hydro-alcoholic solution, containing 0 72 per cent of ferric sulphate, 1 11 per cent of magnesium sulphate, 0 03 per cent of manganese sulphate and 9 08 per cent of free sulphuric acid During an interview the charge was made that the chemist did not know his business, because he failed to find "Ochra" (an iron ore) which was present The history of the purported discovery of "Lung-Germine" is similar to that of many other fraudulent remedies In this case the discoverer happened to be "an old German doctor-scientist who lived in Hamburg, Germany" This doctor "at last succeeded in finding a combination or formulæ that would actually destroy tubercle bacilli regardless of their localization, without injury to the patient This is the underlying principle by means of which "Lung-Germine" is claimed to eradicate tuberculosis from the system To quote again

> The immediate and direct operation of Lung Germine is the destruction of the disease germs, whether they be located in the lungs, bronchial tubes, glands of the throat or neck, or in any other organ of the human system, is entirely immaterial The lungs, as a matter of fact, are very sensitive organs, and when these germs are being torn from their lodgments and discharged together with the impurities and secretions, it often weakens the patient considerably *This is the most important period of the whole treatment and the turning point to recovery*

It is almost unnecessary to state that it is well known that there is no single medicine or mixture of medicines which can enter the living tissues of the human system and destroy the tuberculous germs, and, furthermore there is at present no known medicine which can cure consumption

Throughout the advertising literature accompanying "Lung-Germine" the representation is made that "Lung-Germine" is a positive cure for consumption This is also indicated by the guarantee slip which the patient is requested to fill out and return to the company The guarantee is, in substance, that the company will return all money paid to the Lung-Germine Company for the first month's treatment of "Lung-Germine," provided no benefit or favorable changes are made in the patient's condition during this time The guarantee, however, is quite a different thing from the representations made by the company, namely, that "Lung-Germine" will effect a permanent cure The price of a two-ounce bottle is $5 00

PLASTERS AS POSITIVE CURES FOR CONSUMPTION

The company promoting this scheme is located at Camden, Maine The plaster employed is similar—except in multiplicity of drugs utilized—to those commonly used by the medical profession and the laity for the treatment of certain affections The composition of the plaster as represented by the company and confirmed in part by analysis is set forth by the following formula

140 lb	Rosin	2½ lb	Venice turpentine
20 lb	Tar	1¼ lb	Oil of hemlock
5 lb	Mutton tallow	1¼ lb	Oil of red cedar
10 lb	Burgundy pitch	1¼ lb	Oil of origanum
10 lb	Beeswax	1¼ lb	Laudanum
5 lb	White pine turpentine	1¾ lb	Camphor gum
		5 oz.	Tartar emetic
2½ lb	Balsam of fir		

With these plasters it is represented not only to be able to cure consumption, but "Lung Complaints, and all Bronchial Troubles, Kidney Diseases, Heart Diseases, Liver Complaints, Dropsy, Female Weakness, Sore and Weak Eyes" It is the height of folly for any individual to claim that a simple plaster will cure all the diseases contained under the above headings One of the reasons advanced for the superiority of the plasters is that they are spread by hand and not by machinery They certainly contain nothing to warrant these rep
sentations, neither is the effect produced by the ap
tion of the same such as to warrant them To show the
above ridiculous features it is only necessary to rs are
ate such diseases as chronic bronchitis, bron attempt
bronchial asthma, emphysema, gangrene , but class
the lungs, as well as Bright's disease um," which em-
to mitral lesions, dropsy due to ogy and Therapeutics of the
etc Exactly in what manne Fifty seventh Annual Session,
sented can have any inf of the Secretary of Agriculture and
difficult of comprehens

The manner in which it is claimed that these plasters act is set forth in the following quotation

> The remarkable cures performed by these plasters are brought about by their action in drawing from the body and absorbing the poisonous germs of disease, and when one has been applied on the affected part of a person for a few days, it will become so impregnated with disease that it can absorb no more, therefore the necessity of changing for fresh ones often

It is difficult to understand in what miraculous manner these plasters are able to draw from the body and absorb the poisonous germs of diseases

The advertising literature contains numerous testimonials on which evidently are based the following misrepresentations relating to what these marvelous plasters are known to cure

> SOME OF THE DISEASES ORDWAY PLASTERS ARE KNOWN TO CURE
>
> We have on file, and can produce, unsolicited testimonial letters covering all the diseases mentioned below, either from the people themselves or actual eye witnesses. What stronger evidence could we give? Consumption, Rheumatism, Pneumonia, Fever, Lame Back, Lame Side, Female Weakness, Sore Lungs, Sciatica, Dropsy of the Kidneys, Kidney Trouble, Asthma, Heart Disease, Diphtheria, Dyspepsia, Bright's Disease, Back ache, Lumbago, Bronchitis, La Grippe, Catarrh of the Stomach, Neuralgia and Sick Headaches, Abscess, Sprains, Cuts, Goiter, Sore Breast, Blood Poison, Nervous Prostration

It is well established at present that the vast majority of testimonials are either fraudulent or have a questionable cause for existing

"TUBERCULOZYNE"

This remedy is placed on the market by a firm located at Kalamazoo, Mich It is very interesting to note that the claims made are only for the cure of consumption

Two liquid preparations are employed, one colored amber with caramel, and another red with an anilin dye The chief active constituents of the red medicine are alcohol and phosphatic material Those of the amber-colored preparation are alcohol and a small quantity of an organic copper salt It is also claimed by the firm to contain heroin The presence of this, however, could not be established, and even if present it certainly does not possess a curative effect for consumption

A careful investigation of the remedy discloses the fact that the virtue of this medicine is claimed to reside almost solely in the small quantity of organic copper salt present An extended investigation was entered into for the purpose of ascertaining to what extent such a copper salt was known by the medical profession to be of value in the treatment or cure of consumption, and no one appeared to be familiar with any properties inherent in organic copper salts that would be useful in the treatment or cure of consumption It was found, however, that a considerable number of experiments had been made by a French physician in some of the French hospitals with certain organic salts of copper, and, according to his results, such copper salts appear to have a beneficial influence in the treatment and cure of consumption, and when the case came up for final hearing this was the evidence presented by the company to show that it has a substantial basis for its remedy Under the conditions it was difficult to assert that the remedy was not consistent with its claims This brings out one of difficult features constantly being met with in ith these products Medical literature teems such things as these and it is not difficult to ce apparently of an authentic character to almost any fraudulent claim Such is not with past records but current literature is milar footsteps An interesting feature

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in connection with the treatment of this remedy is that the general directions prescribe the regularly recognized open-air treatment, coupled with a careful regulation of the diet This is undoubtedly the basis of any success that may result from the use of this remedy rather than the medicine itself

CURE ALLS

"AMERICAN HERB CURE"

The above name is employed by a Dr Munroe, doing business throughout the states west of the Mississippi River The scheme employed is that of an itinerant drug vender The claims are those usually represented by men of this type, namely, cure-all, as is clearly indicated by the following extract taken from the advertising literature

> It will remove all animal parasites from the system, positively cures Rheumatism, Neuralgia, Ague, Catarrh, Scrofula, Syphilitic Humors and is a Specific for Liver and Kidneys

The representation is made that a number of different mixtures are employed for the cure of different affections An investigation, however shows that the medicines marked 1, 2 and 3, respectively, are of one and the same composition, namely, senna leaves, black cohosh root, burdock root, mandrake root, colocynth apple, aloes, capsicum, and sassafras The manner in which this mixture is employed is simply to make an infusion and take of the resulting tea as indicated by directions accompanying each package

To illustrate the absurd features contained in this treatment, it is necessary to refer only to a case that came under investigation namely, that the said Dr Munroe took for treatment and represented to effect a permanent cure of a case of diabetes mellitus for the consideration of $30, and if he failed in making a cure the money would be refunded It is only necessary to state here that the case was not cured and that Dr Munroe did not refund the money The reason set forth by him was that the patient did not represent to him the actual condition of the disease, that instead of its being in the incipient stage it was actually in the chronic condition This latter point is brought out to show the schemes usually resorted to for the purpose of evading the return of money once in possession

"FORCE OF LIFE"—REMEDIES EXPLOITED BY THE FORCE OF LIFE COMPANY, NEW YORK CITY

According to the advertising literature, these remedies embody what might be considered some of the latest achievements both in chemistry and medicine The sheet anchor of the whole system appears to reside in the chemical compound known as lecithin, "The Force of Life," and the recently discovered chemical element, radium The literature which sets forth the virtues of lecithin describes in most glowing terms how Dr Hadley had discovered "in the sheen of the midnight glow" a method for making lecithin synthetically *It is represented* that lecithin possesses the power of rendering the human system immune to the invasion of bacteria and that it actually kills microbes and germs, thus preventing them from producing disease'

The preparations employed by this firm are represented in the form of liquids, tablets and capsules Fo[illegible] liquid preparations were submitted marked 'Fir[illegible] Week" "Second Week," "Third Week and "F[illegible] Week" respectively, leading to the belief t[illegible] either of different strengths of the same [illegible] solutions containing different ingredients [illegible] tion however showed that they are ess[illegible] same composition, differing only slightly in the percentage content of the several component constituents The following results represent the approximate average composition of the four packages

	Per cent
Water	71 53
Alcohol, by weight	7 00
Volatile acids as acetic	0 61
Non volatile acids as tartaric	0 70
Sugars	*3 96*
Glycerin	10 18
Glycerophosphates	2 89
Undetermined	3 13

As above pointed out, lecithin is the agent on which is largely based the wonderful virtues of these remedies A careful search for this compound was made, but it could not be detected

Two kinds of tablets were also submitted, one lavender in color and the other yellow The yellow tablets contain terpin hydrate, heroin and licorice root, and the lavender tablets contain inspissated oxgall, pancreatin, colocynth extract, quinin hydrochlorate, extract of nux vomica, extract of taraxacum, and sodium and calcium glycero phosphates It was impossible to establish the presence of lecithin in either mixture

The capsules were designated "Life-Ray Capsules" and were claimed to contain either radium or to be charged with radium A careful examination of the capsules and their contents shows that they do not possess any radio-activity, but, on the other hand, consist chiefly of starch and calcium sulphid It was represented that these capsules could not be purchased, but were simply loaned to the patient as an adjunct in the treatment with the other remedies

Had Dr Hadley succeeded in preparing lecithin artificially it would certainly be considered a "marvelous discovery," but the simple fact that none of the medicines examined contain this compound indicates that he is not taking advantage of his discovery A considerable number of observations have been made relative to lecithin as a medicinal agent, but thus far no one is able to point to any noteworthy results Whether lecithin will ever attain the eminent position medicinally ascribed to it by some remains for the future to demonstrate It is a well-known fact that this chemical is present in nerve tissue and is a common constituent of many food products, such as the yolk of eggs, beans, peas, lentils, milk, etc Exactly in what manner and in what form lecithin is absorbed and utilized is not definitely known, but it seems singular that lecithin isolated by solvents from different sources and given in minute doses should possess the claimed extraordinary virtues while the influence of the comparatively large amounts taken daily with food seems to be lost sight of

"NUTRIOLA."

The methods employed by the promoters of the remedies sold under the above title have been made public in The Journal.[1] A considerable number of mixtures are used to meet almost all conditions of impairment All of the medicines employed consist of useful ingredients, in various combinations, similar to those commonly employed by the medical practitioner They are all of recognized merit, but possess nothing novel nor do they surpass in merit other well-known remedies of similar combinations

It is contended that the Nutriola medicines are new because it was admitted that "at best the chemical analysis was only approximate " All the chemists in the world, severally and combined, could not make more than a partial analysis, far from proximate, of a sample of the well-known medicine, "Warburg's Tincture," and yet who for a moment, because of this impossibility, would think of calling "Warburg's Tincture" a new medicine Again, it is contended that the chemist reported the presence of strychnin in one tablet which it does not contain, but it does contain "a small amount of solid extract of nux vomica, belladonna, etc, combined with other valuable chemicals " The company also contended that a certain red tablet contained, among other valuable ingredients, iron peptonate and manganese dioxid, and a yellow tablet contained pepsin, pancreatin, Taka-diastase, aromatic powder, etc When, however, informed that the red tablet was simply Blaud's Mass and in the yellow tablet it was possible to recognize positively only one medicinal agent, viz, ginger, it was admitted that tablets containing such ingredients were used at one time The yellow tablets were tested for both amylolytic and proteolytic activity with negative results The Nutriola firm at first refused to furnish the composition of its remedies, but finally did so, and all conclusions, so far as the remedies are concerned, were based on the information supplied by the company

"SALVITA REMEDIES "

The Salvita Medicine Company, Battle Creek, Mich, announces

> The Only Sure Cure for Nervous and General Debility, Organic Weakness, Impaired Vitality, All Rheumatic Affections, Heart, Stomach, Kidney and Liver Complaints, Female Troubles, Catarrh of Any Organ and All Chronic and Wasting Diseases

It is also represented that these remedies will conquer all physical pains and bodily weakness and are

> A true specific for all cases of addiction to liquor, morphin, cocain and tobacco habits Cures all blood disorders
> It does not contain any alcohol or opiates

The patient is also led to the belief that all these wonderful results are produced without the use of drugs

Examination of the remedies employed by this company shows that they are possessed of the usual medicinal agents employed for treating various affections The "Nerve Tonic" contains hypophosphites, nux vomica, clover tops, sarsaparilla, gentian, etc The "Salvita Oil" is nothing but an ordinary liniment, the chief constituents of which are turpentine, gum camphor, capsicum and castile soap Among the other preparations employed by this firm are "Kidney and Bladder Tablets," "Liver and Constipation Pills," "Cold and Lagrippe Ovules " It is represented that the chief ingredients contained in the "Cold and Lagrippe Ovules" are quinin sulphate, ammonia muriate and camphor An investigation showed that these pills contained neither quinin sulphate nor ammonia muriate, but in place of them acetanilid is employed Attention also must be *called to the fact that it is represented in the advertising* literature that these preparations do not contain any opium This representation is false, opium be of the chief constituents of some of the prep From the above information it can readily be a vast majority of the representations made by are false and fraudulent

(*To be continued*)

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[1] The Journal A. M. A. April 28 1906

Naming of Carbon Compounds—One This cates the ketone group, R′CO.R′, thus propanonal is $CH_3.CO CH_3$—*Pharm Rev*, August, 1906

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UTILITY OF SALINE SOLUTION IN TREATMENT OF FEVER *

J MADISON TAYLOR, A.B , M.D
PHILADELPHIA.

Increasing experience in the employment of physiologic saline solution (6/1000) by the mouth in all febrile states in children encourages me to offer present certain conclusions This solution was formerly and erroneously called "normal salt solution" My findings are not sufficiently comprehensive as yet to report in full, but this shall be done later

In a paper[1] read as part of a symposium on pneumonia before the Medical Association of Greater New York, Dec 11, 1905, the rationale and value of the measure was outlined, with some items of history and personal experience

The use of salines by hypodermoclysis and later by enteroclysis has become an established form of treatment affording relief in many exceptionally severe disease states The results noted in patients *in extremis* have been pretty well established to be of more than partial value The effects attributed to this agency are variously interpreted In this short communication it must suffice to outline the physiologic warranties and to point out such explanations of the indications as are so far acceptably offered

NEED OF SALINE SOLUTION

Biologically it is admitted that, our origin being from marine forms of life, our cells still retain certain features exhibiting marine characteristics The fluid media, the body fluids, the blood, depend for their most important activities chiefly on an adequate proportion of chlorid of sodium, whatever rôle the other salts may play The significance of this fact was clearly set forth by Sajous,[2] who made plain that the chief rôle, in the maintenance of the integrity of the blood, is played by the status of its alkalinity Some distinctly original observations and conclusions are presented bearing practically on our interpretation of vital phenomena, fully sustained by citations

A brief outline of the clinical bearings of these facts may serve as clinical indications The plasmatic salines are supplied variously in the food in health, as condiments and as constituents of certain articles, but in disease a restriction and alteration of customary diet, anorexia, etc , cuts this down The outgo proceeds unchecked, in many conditions it is markedly increased There being no intrinsic reserve, since the source of supply is wholly external to the organism, the tissues must soon suffer a saline starvation, with its obvious consequences impairment of cellular interchanges, osmosis diapedesis, etc , but especially a lowering of the oxygen-carrying power of the plasma In my paper[1] referred to it is said whatever theory of immunity we adopt, whether we conclude with Büchner that the blood protects the body through the presence in this tissue of "alexins," whether, with Ehrlich, we grant the tissue cells the power to secrete "receptors," whether we agree with Sajous[2] that the internal secretions supply the needful protective agents to the blood, the fact remains that the life fluid is unquestionably endowed with a substance capable of staying the hand of death when conditions are such as to enable it to act unhindered "We know now," recently wrote Behring, "that immunizing antibodies regularly appear in the blood whenever an infectious disease terminates in recovery" Is this not the one feature of the problem which should command our keenest interest? Have we not here the one greatest weapon through which it is possible to reach and overcome deadly pathogenic elements? It is to this weapon and to the preservation of its integrity as a potent means of attack that reference is here made We are looking on all sides for immunizing sera, which, like antitoxin in diphtheria, will enable us to cope with the great scourges of humanity, among which pneumonia is rapidly taking the lead In a recent address, Behring, advancing it as a biologic law, says "Specific immunizing substances can be obtained in no other way than from the blood and organic juices of individuals who have passed through the diseases against which we wish to produce immunity" Now, since saline solution can, as proven experimentally, maintain the blood's antitoxic properties, it can do so only by enabling these blood and tissue juices to act efficaciously and specifically, and according to Sajous, the early use of saline solution, in all febrile infections, must, therefore, produce the effects that we are trying to obtain from specific sera

We fail to preserve economically the integrity of the immunizing principles of the blood if we wait until the system is practically overwhelmed by toxins, until the functions of the cells that produce them are well nigh paralyzed, until the lungs are engorged to such an extent that cyanosis occurs, until pulmonary edema is present or threatened, until the overworked kidneys can withstand no further sudden assaults of toxic waste, until the blood, already poor in oxygen, can hardly bear dilution, and, finally until the nerve centers are so dulled that they no longer respond to peripheral impressions As well to wait for the moribund stage to occur in a case of diphtheria before using antitoxin as to employ saline solution during this stage of desperate struggle

Very different is Sajous' conception of the importance of the early and constant use of saline solution Here all untoward features, just reviewed, are taken into account, and the aim is eminently in keeping with the most advanced teaching of experimental research, namely "to preserve and enhance the blood's bactericidal and antitoxic properties from the outset of the disease" This was embodied over three years ago by Sajous in a sentence which should be carefully noted, since it has already been instrumental in saving life

> The primary effect of deficiency of alkaline salts in the blood being to inhibit nutrition, to impair the efficiency of, and finally arrest the protective functions of the organism, it constitutes one of the most active causes of death

The practical importance of the blood's alkaline salts has been emphasized repeatedly A brief quotation from Howell's recently published "Physiology" will suffice

> The salts of the blood have most important functions They maintain a normal composition and osmotic pressure in the liquids and tissues of the body and by virtue of their osmotic pressure they play an important part in controlling the flow of water to and from the tissues Moreover these salts constitute an essential part of the composition of living matter In some way they are bound up in the structure of the living molecule, and are necessary to its normal reactions or irritability

BLOOD SALTS AND FEVER

Now, given any disease attended by marked fever the loss of the blood's main salt sodium chlorid, is not replaced, owing to [illegible] die[illegible] [illegible]ia, and the many factors which cause the patient to reduce greatly the intake of normal food At least one-half ounce of sodium chlorid being voided daily in the urine of an adult, the time soon comes when the cells are hampered in their vital functions, they gradually cease to secrete their autoprotective antibodies, thus giving free sway to the pathogenic elements In pneumonia especially, the cells hold their sodium chlorid in reserve and the salt soon ceases to appear in the urine But watch these cases, notwithstanding Nature's attempt to thwart a desperate situation, the patient steadily sinks, deprived of that which represents in this connection their *pabulum vitæ* Sajous' teachings are thus summarized

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* Read in the Section on Diseases of Children of the American Medical Association at the Fifty-seventh Annual Session June 1906

[1] N Y Med. Record Jan. 13 1906.

[2] "Internal Secretions and Principles of Medicine 1903 p. 778 et al

> Steadily as the febrile process advances the salts are consumed, and being inadequately renewed, the vital and defensive functions are increasingly hampered until life ceases

Hence he advises early and continuous use of saline solution, from the outset, at the end of all fevers, so as to avoid any chance of reaching an individual danger limit

What connection is there between a febrile process and the adequacy of the blood salts? In reply I quote from a book[3] published since the above teachings were placed on record Referring to the diminution of the blood alkalinity during fever, the author says

> The cause of this change is unknown, but whatever the true explanation may be, it is probable that the change is highly important for the organism, for it is an unfavorable sign in febrile disease, and it is known that diminished alkalinity of the blood goes hand in hand with increased susceptibility to infection.

Sajous has already adduced considerable experimental evidence to the same effect, including that contributed by Metchnikoff, Behring, Nissen, Paul, von Fodor, Blumenthal, and many other authorities

My friend, David Riesman, says that he is inclined to attribute my effects chiefly to the ingested water His rule, in adult cases of fever, is to insist that they take four ounces of water every two hours This induces polyuria, up to 80 or 90 ounces daily He is convinced that nervous symptoms are thereby made less pronounced, there is less tympany and the tongue is more moist The bowels are not made loose My findings are on similar lines, but the bowels seem to do better for the salt Valuable as the use of excessive amounts of water undoubtedly often is, we should approach the subject with caution, having due regard to the possible dangers of injudicious urging to take as much as possible In this connection it is pertinent to refer to the suggestive paper of Morris Manges,[4] who also quotes Kraus[5] In his (Kraus') recently published treatise on the "Dietetic Treatment of Cardiac Disease" he says

> Water once within the body is no longer (merely) water, *but must be considered in its relations to the various salts*, colloids, etc., with which it comes in contact Every drop of water introduced into the system must be excreted directly or indirectly, by the heart increasing the demands on that organ.

He agrees with von Noorden that the increased drinking of water does not materially affect the breaking down of albumins The increase of metabolism, on the whole is great, but takes place at the expense of the carbohydrates and fats An important point quoted from Baruch is that, whereas ingestion of hot water raises pulse rate and lowers blood pressure, cold water diminishes pulse rate and raises blood pressure, but water of 60 F has very little effect. In a case in which the heart is no longer competent or weakened, we do well to heed the fact, pointed out by von Noorden and his pupils (Ritter, Dapper, Reetkowski and Mohr), that the daily quantity of water should be restricted to one and one-quarter liters (about 2½ pints) daily, exclusive of fluids in food The elimination of important salts, he says, is not lessened by this restriction Manges recommends that in infectious diseases and septic conditions the water should be given cold and in frequent small quantities

AUTHOR'S METHOD

My own method is to give to all children, in whom a rise of temperature occurs, freely of the normal physiologic saline solution (6/1000) usually half an hour before feeding time, every three hours They are encouraged to drink all they will. For infants the saline solution (6/1000) is used in the modification of milk and in diluting whatever food is used Children rarely object to the saline taste, which, indeed, is scarcely perceptible, and soon become accustomed to it. My head nurse, service of 1905, Miss Hill, tells me children occasionally noticed its unusual taste, but soon grew to like it During my present service, Miss Fox, head nurse, tells me she observes no objections at all Both volunteered the remark that the cases progressed apparently more satisfactorily under the saline régime

As to the elimination of skin and kidneys, always difficult to estimate in young children, we have not secured exact data In another year, with cooperation of my colleagues, it is hoped to make a more complete study of these points It is likewise obviously difficult to institute accurate comparisons with cases treated otherwise It is my hope to interest physicians whose opportunities for clinical experience are large, to employ this exceedingly simple, convenient and eminently rational auxiliary treatment It furnishes, in reality, a form of food and, to my mind, is the essential principle of febrile dietetics

CASE SUMMARIES

Appended are the notes of eleven cases from my present service, chosen solely on account of their extreme severity, all showing grave complications Four of these patients died soon after admission, being classified as moribund, yet two of these survived longer than was deemed possible

Case 1 —A E, aged 10 months, was admitted April 3, 1906, ninth day of double pneumonia, accompanied by pronounced meningeal symptoms Temperature for four days, 102 to 104.5, pulse 130 to 180, respirations 40 to 60 On fourth day temperature dropped by lysis, with corresponding drop of pulse and respiration, meningeal symptoms cleared up gradually and patient was discharged cured two weeks after admission

Case 2 —H M, aged 9, was admitted April 27 1906, second week of typhoid fever, along with bronchopneumonia at right apex Temperature 102 to 104 for seven days, pulse and respiration correspondingly high Dropped by lysis eighth day after admission No other complications Discharged cured May 25, 1906

Case 4 —W H, aged 1, was admitted May 1, 1906, double pneumonia. Patient was cyanotic, temperature 99 to 101, pulse 160 to 170, respirations 90 to 100 Died 16 hours after admission.

Case 5 —J W, aged 22 months, had pneumonia six weeks previously in hospital Patient returned May 7, 1906, with double bronchopneumonia Temperature 100 to 105, pulse 140 to 180, respirations 50 to 90 Distressing dyspnea Died May 12, 1906

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[3] Lazarus Barlow General Pathology 1905 second edition

[4] Dangers of Excessive Water Drinking N Y Med. Jour., Jan 21 1905

[5] Handbuch der Ernährungs Therapie von Leyden und Klemperer 1903

Case 6—D F, aged 8, was admitted April 1, 1906, on probably the third day of a typhoid, along with pneumonia at right apex Temperature 103 to 105, pulse 120 to 150, respirations 36 to 56 until the ninth day, when temperature dropped by lysis During the first week there was marked distension of abdomen, lasting about three days Patient was discharged cured April 30, 1906

Case 7—J DeG, aged 6, was admitted April 1, 1906, fourteenth day of typhoid, with meningeal symptoms Temperature first seven days 101 to 104, pulse 120 to 160, respiration not accelerated At the end of second week (nine days of disease) the temperature was normal Two days later patient showed symptoms of pneumonia Temperature for next seven days 101 to 104 5, pulse 140 to 160, respirations 40 to 54, dropped by lysis Patient, who had been sullen and rather stupid from time of admission, brightened up rapidly on seventh day and was discharged in good condition May 28, 1906

Case 8—D R., aged 10 months, was admitted April 1, 1906, with severe pneumonia, practically moribund Temperature 103 to 104, pulse 140 to 160, respirations 32 to 70 Lived 48 hours after admission

Case 9—M W, aged 1, was admitted May 15, 1906, with pneumonia and extremely severe gastroenteritis Patient was poorly nourished and apparently in dying condition There were seven or eight stools daily, almost pure mucus Temperature 98 to 102, pulse 140 to 200, respirations 30 to 80 Lived one week

Case 10—W M, aged 10 months, was admitted April 4, 1906 Double pneumonia, involving entire left lung and apex of right lung Life despaired of daily for 10 days Temperature 102 to 106, respirations 40 to 72, pulse 120 to 180 for six days, then 99 to 104 next nine days, and 100 to 103 next 10 days Normal at end of fourth week There was more or less gastrointestinal disturbance during entire four weeks Child was discharged in good condition May 26, 1906

Case 11—L D, aged 1, was admitted April 5, 1906, desperately ill with double bronchopneumonia Temperature ranged from 99 to 105 for four days, then dropped to normal Next day temperature rose to 105, pulse to 180, respiration to 60, and remained high for six days, then dropped by lysis In 24 hours temperature rose to 103, pulse to 170, respiration to 50 Temperature dropped again in seven days and remained normal. There was marked gastrointestinal disturbance during second and third week of illness The patient was discharged perfectly well May 1, 1906

ADMINISTRATION OF SALINES BY THE MOUTH

The use of salines by the mouth has been employed by Dr J B Todd, of Syracuse, who twice reported his experience[6] He gives convincing reasons for preferring the administration of salines in this way rather than by the surgical method of hypodermoclysis or the uncertain one of enteroclysis He asserts rightly that it is not physiologic to crowd a large amount of salt into the tissues at one point and one time A continued supply is vastly better from all standpoints

Recently Garcia Y Marin[7] described his success in the employment of massive injections of normal salt solution in the treatment of typhoid fever He claims that these large daily saline infusions amply fulfil the chief indications which are (*a*) to destroy the etiologic factors, (*b*) to supplement natural defenses of the organism against infection and (*c*) to favor elimination of toxic principles, the retention of which causes the typhoid states His results were an increase of blood tension, augmentation of the quantity of urine a transitory rise of temperature followed by reduction, abundant bowel discharges and profuse sweatings, excitation of the glandular functions and nervous forces

DISCUSSION

Dr H C Worthington, Oak Park, Ill, said that he has always given mutton or chicken broth along with the food in the treatment of febrile cases, and he believes that stimulation has come from the salt in the broths He believes that it is a thoroughly good thing to add these broths to the milk diet

FOREIGN BODIES IN THE BRONCHI

THEIR SUCCESSFUL REMOVAL WITH THE BRONCHOSCOPE *

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There is such a variance in the character of the foreign bodies that find their way into the bronchi, and persons are so variably susceptible to their presence, some with slight complaints, others mortally ill, that the recital of individual experiences must surely help in the momentous decision we are called on to give May we temporize or must we act at once? To help in this elucidation is my reason for presenting my own observations of five cases seen in a little more than a year

Case 1—On Jan 24, 1905, in consultation with Dr Sidney Yankauer of this city, I saw a ten months old boy, who, while the juice of an orange was being insinuated into his mouth, inhaled one of the orange seeds I responded promptly, arriving an hour after the accident, the child was coughing distressfully and markedly cyanotic The coughing soon ceased and with it the breathing became freer

Operation—By my advice the child was taken to a hospital, tracheotomy done, and with my assistance the seed removed by Dr Yankauer through the bronchoscopic tube The child already showed signs of interference with vesicular breathing and pneumonia was threatened Only prompt removal prevented that occurrence

This case which has been more fully reported,[1] is especially interesting in that it is the youngest patient thus far recorded as inhaling a foreign body with successful removal by means of the bronchoscope

Case 2—A child, aged 6, patient of Dr Charles A Elsberg, swallowed a glass headed pin Dr Elsberg kindly permitted me to attempt its location by direct bronchoscopy I was unable to introduce the bronchoscopic tube successfully, nor did I persist in many attempts, as the child was already enfeebled by its coughing and distress As the sequel showed even if located, it could not have been extracted in the usual manner, for on introducing a large endoscopic tube through the tracheotomy wound the pin was seen lying crosswise, and it required much bending by powerful forceps to extract it Complete recovery followed[2]

Case 3—On Sept 28 1905 Dr C A McWilliams adjunct attending surgeon to the Presbyterian Hospital informed me that he had a boy aged 5 with a foreign body in the right bronchus and as there were no bronchoscopic instruments in the institution he was in a quandary I cheerfully offered my services and as the patient was then in a comfortable condition an appointment was made for the following day September 29 at 4 p m

History—The following history was given On September 26, three days previous while he was playing with some beans he came to his mother and said that he had swallowed one He was slightly uncomfortable but his mother was not alarmed about him In the afternoon he became somewhat blue and complained of pain behind the upper part of the sternum The physician who was called advised removal to the hospital

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[6] N Y Med. Jour May 20 1905 also N Y Med. Record, April 14, 1906

[7] Le Jour de Med. et Chir Montreal March, 1906

[*] Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty seventh Annual Session June 1906

[1] Medical Record Feb 11 1905

[2] Laryngoscope December 1905 p 944

Examination—The examination made is in the hospital records as follows under date of September 28, two days after the accident "All other parts are normal, but the lungs are seriously involved The expansion is more marked on the left and the left chest is more prominent The right percussion note is dull, on the left hyper resonant Auscultation sound on left loud and vesicular breathing lowered and bronchial on the right Dulness is marked over the lower portion of the right chest, and all the evidence of occlusion of the right bronchus"

Operation—Direct bronchoscopy under chloroform narcosis was attempted, but soon desisted, because of the very small size of the larynx. Dr McWilliams then deftly performed tracheotomy The foreign body was seen at the end of the brnochoscopic tube with the Killian lamp The bean was removed with Dr Yankauer's assistance It was macerated and I removed it in three pieces Dr Northrup, who was present, examined the chest and noted the remarkable rapidity with which the lung cleared up on the removal of the obstruction. The patient was exceedingly restless during the night, respirations grew more and more rapid, the pulse weakened, and, at 8 10 a m, September 30, he died

Case 4—An adult woman who had inhaled pieces of turkey bone five months previously, was under the care of Dr Charles A Elsberg The case is of interest in that the diagnosis was made by clinicians originally and that one well known authority opposed operation

Operation—The patient suffered so much from violent spasms of coughing that she begged for relief Direct bronchoscopy was not attempted I was present at the operation Tracheotomy was done, a large endoscopic tube introduced, the Killian light thrown in and several pieces of bone were removed with alligator forceps Recovery followed

I have the consent of the operating surgeon to add the above case to the list of my bronchoscopic experiences

Case 5—*History*—F M., aged 9, schoolboy, living in an adjacent city, was brought to my office on April 14, 1906, with the following history On Nov 9, 1905, he had procured a piece of brass in a prize package which is made for the express purpose of putting over a tooth, that the child may startle other children by showing "a gold mounted tooth" A counterpart, which was shown me, had a piece of brass about three-fourths of an inch long attached to the base of a cap shaped piece While having this in his mouth the child inspired it and cough and dyspnea set in promptly With this history several physicians had seen the patient but none could satisfy himself that a foreign body was present

The dyspnea soon ceased and attacks of coughing at intervals remained There would be rest for a time and then a most violent spasm of coughing would last unceasingly for an hour Of late daily chills occurred, the patient was emaciated and feeble, no abnormality was found in the nose or throat, on the right side there was marked retraction of the lower border of the right lung and a whistling sound on expiration over the right bronchus The opinion was given that there was a foreign body in the right bronchus

Operation—He was taken to the x ray department of the Mt Sinai Hospital and with the fluoroscope I distinctly saw the body On April 22, 1906, he was admitted as my patient in the Mt Sinai Hospital On April 23, under chloroform anesthesia, several attempts were made at direct bronchoscopy, the tube finally entering The foreign body was not visible, so I promptly did a low tracheotomy While the assistants held the trachea apart with long silk sutures a much wider tube was introduced, the foreign body was seen in the right bronchus and removed

On the fifth day, the patient having breathed well twenty four hours with the tracheal tube *in situ*, corked up, the tube was removed and on the eighth day he was discharged cured, the foreign body having been five months in his bronchus The external wound has since entirely healed.

Of these five patients, one died It will be remembered that in that case the foreign body had been inhaled two days previous to admission of the patient in the hospital, that the foreign body was not only of a solid nature, but of the kind that swells, and that the symptoms of pulmonary obstruction were hourly increasing Hence, when I was notified of the presence of the foreign body and asked to assist in its removal with the bronchoscope, I feel now that I should have insisted on its immediate removal, and the patient considered as an emergency case I had not seen the patient to know for myself his condition, as I am not connected with the hospital in question The attending surgeon stated that at the time of notifying me the patient was in a fairly comfortable condition and it seemed as if he could well wait the customary operating hour of the next day While the result might have been the same, its early removal would have increased the chances for recovery

As an added lesson in the study of this comparatively recent subject, the following conclusions may be given

1 Certain bodies may be left *in situ* for some time without producing symptoms immediately dangerous to life

2 The presence of a foreign body of a solid nature or one that has a tendency to swell, occluding the entrance of air into the lung below it and producing symptoms that gradually become more severe, should be looked on as constituting an emergency case to be operated on at once Indeed, we should anticipate the symptoms, as was done in Case 1, in which I insisted on immediate operation and in which the orange seed was removed within three hours of its inhalation In this case the parents were for delay, as the cyanosis had disappeared, but I insisted on its immediate removal

DIAGNOSIS

Regarding the question of diagnosis With the urgent symptoms that are present and the direct statement of the patient or witness to the accident, the diagnosis is readily made Without immediate symptoms one would suppose a foreign body had entered the esophagus With metallic substances the Roentgen ray is apt to be our main dependence, yet, in Case 2, the foreign body, a glass-headed pin, was not seen Most careful auscultation will, however, aid materially In the case of solid bodies, the absence of breathing below it with dulness and retraction of the side will be noted In bodies that are not entirely obstructive a musical sound on the expiratory act is heard, as was shown to be the case in Cases 2 and 5

TREATMENT

The diagnosis having been established, we must decide as to the manner of removal Unless there is some reason of great importance for delay, operation should be undertaken early, as in the fewest instances may we expect the substances to be coughed up As before stated, the operation may be one requiring prompt attention in order to save life, others may wait our own convenience as to time

Should attempts at direct bronchoscopy be made in these cases? When we consider that the majority of these are in young children with very small laryngeal orifices, the length of time a direct bronchoscopy requires, and the possibility of injury to the laryngeal membrane, we feel that a tracheotomy is far preferable The operation is quickly done, a much larger tube may be inserted in the trachea than could be inserted in the larynx (in Dr Elsberg's two cases and one of my own, the largest endoscopic tube was used) and, furthermore, we are so much nearer the foreign body for manipulation I should therefore, answer the question that tracheotomy with subsequent removal is by far the best method in these cases, and objection to it can not be maintained It is a time saver In one instance in which no haste was necessary, I timed the operator and it took 1½ minutes until the trachea was opened and ready for the tube In the after-treatment it will be necessary to keep the temperature of the room warm, to prevent, to a great degree, the danger of pneumonia

Special care and nursing is required for a few days, and although none of these patients was possessed of means, yet they could and did secure the needed attention As these remarks are intended for the presentation of personal experience, no general reference to the literature of the subject is made, nor is such necessary, as the subject has been so well presented with a reference of 50 recent cases in a paper by Thomas A Clayton [3]

CONCLUSIONS

As a result of my experience, I conclude

1 The diagnosis may often be fully established by auscultation and percussion and the use of Roentgen rays may not always be depended on

2 Solid bodies producing occlusion should be operated on immediately

3 Tracheotomy affords by far the best chance for the patient

4 The public, as well as the profession, is in great debt to Professor Killian for his valuable instruments and his work on "Bronchoscopy," resulting in the saving of many lives that otherwise would have been lost.

25 East Seventy seventh Street

(Continued on page 1586)

DIAGNOSIS OF TUBERCULOSIS IN INFANTS AND CHILDREN [*]

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The cause of tuberculosis is the tubercle bacilli It is an infectious disease About 8 per cent of all children who die show at autopsy evidences of tuberculosis Tuberculosis in one or in both parents is a distinctly predisposing cause, and poor hygiene, improper food or, in fact, any influence of a debilitating nature predisposes to the disease Bronchopneumonia, pleurisy, repeated attacks of bronchitis or chronic throat conditions and the acute infectious diseases pertussis, measles and influenza, all predispose the child to subsequent tubercular infection

Tuberculosis is common in children over 4 months of age, but congenital tuberculosis is rare and the number of cases reported of children who die of tuberculosis before the fourth month are probably many of them congenital The infection may enter through the respiratory tract, the digestive tract and the skin The latter is very rare In a large majority of cases, probably 90 per cent., infection takes place through the respiratory tract Diseases of mucous membranes such as one sees in chronic throat conditions in children especially enlarged tonsils increase the possibilities of a tuberculous infection, as a healthy mucous membrane offers more resistance to the passage through it of the tubercle bacillus than a mucous membrane in a diseased condition The tubercle bacillus is usually carried by air containing the tubercle of dried sputum After penetrating the mucous membrane, the bacilli enter the lymphatic ducts and are arrested in their progress by the lymphatic glands These glands may be those of the neck, trachea or larger bronchi As a result of this infection the glands undergo acute inflammation and caseation or the process may be checked and encapsulation takes place, the disease being arrested permanently or perhaps only for a time A great deal depends on the child's resistance, the process being much more likely to be checked by the lymphatic glands in a strong and vigorous child than in one which is frail and delicate The initial lesion may be in the walls of the smaller bronchi, alveoli, or in the connective tissue of the lung

As a diseased intestinal mucous membrane offers less resistance than does a healthy one to the passage of the tubercle bacillus, chronic intestinal disease or intestinal ulceration increases the liability of infection of the mesenteric glands In infancy meningitis is often associated with tuberculosis in some other part of the body, and in the first two years of life tuberculosis shows itself especially in the bronchial lymph glands, lungs and brain It is very important to appreciate the fact that tuberculosis of the lymph glands is a prominent characteristic of the disease in early infancy and childhood, and that this glandular tuberculosis may remain dormant months or years, but in the end may set up a rapidly developing tuberculosis After the third year tuberculosis of the mesenteric glands, the peritoneum and the intestines is more commonly seen than in earlier life, but during the entire period of infancy and childhood the lungs are almost invariably involved in all cases of moderately advanced tuberculosis

The most common form of tuberculosis is a double tuberculous bronchopneumonia, a disease running a more rapid course in infants than in older children In this tuberculous bronchopneumonia the breaking down of the lungs and the formation of cavities is very common, and the younger the child the more rapid is this process Simple bronchopneumonia is usually also present in these lungs In a very large majority of cases the bronchial glands and the glands at the root of the lung are involved, one or more of them perhaps having undergone caseation, possibly ulcerating into a bronchus and rapidly spreading the disease to the surrounding lung

The clinical picture that one meets with in tuberculosis in infancy and childhood presents many curious features often rendering an early diagnosis difficult and at times well-nigh impossible For the sake of convenience I will describe a chronic, a subacute and an acute form of pulmonary tuberculosis

Chronic Pulmonary Tuberculosis—This is a form in which we have the lung bound down with pleural adhesions, portions of the lung the seat of recent tuberculous infection, other portions showing the typical evidences of old tuberculous disease dense fibrous tissue surrounding small or large cavities or caseous masses, enlarged bronchial glands with perhaps calcification or caseation In these cases the younger the child the less frequently do we f [illegible] tu [illegible] berculous enteritis This is p [illegible] enteritis in t its nature, usually following tuberculosis of some part of the respiratory tract Pulmonary tuberculosis in infants runs a more rapid course than in older children, hence less time is given for secondary tuberculous infection of the intestine Abscess formation in the infant is usually present at death, but has not advanced as a rule as far as we find to be the case in older children, consequently, the amount of tuberculous material coughed up and swallowed is probably distinctly less in infants than in older children Disturbances of digestion are very common in tuberculous infants, but they are usually dependent on the depressed vitality of the baby and its weakened digestive powers and not on tuberculous disease

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[*] Read in the Section on Diseases of Children of the American Medical Association at the Fifty seventh Annual Session June 1906

[3] American Medicine March 17 1906

The history of these cases is often as follows First, there is primary bronchopneumonia which runs a slow course and ends in an incomplete cure The cough does not entirely disappear, the child's health and strength does not completely return Some broncho-vesicular breathing and impairment of resonance remains A second attack of bronchopneumonia occurs, and again the recovery is incomplete or the child develops measles, pertussis or severe influenza, which is followed by a rapid increase in the tuberculous symptoms The earliest evidences of lung involvement are usually found in the upper middle part of the lung, either in front, the upper axilla or in the interscapular region, that is, in the upper portion of the lung, but not as in adults at the apex of the lung, showing clearly that the infection occurs usually through the bronchial glands at the root of the lung The disease runs a slow course At death cavities are usually present and are more easily recognized during life in older children than in infants This is due to the fact that in infants cavity formation is often deep seated in the lung, surrounded by a zone of tuberculous and non-tuberculous pneumonia, and that cavities are less likely to be walled off by dense ous tissue In fact, after the eighth year of life, the ease in children approaches closely the adult type Toward the end of life the pulmonary symptoms are easily recognized and the secondary evidences of tuberculosis in the brain, glands and peritoneum are usually distinct.

Subacute Cases—The disease in these cases runs a more rapid course, the ordinary duration being from two to six months The pulmonary symptoms appear early in the disease, perhaps in the very beginning of the illness, and the symptoms at this stage of the disease are those of an ordinary attack of bronchitis or of a mild bronchopneumonia An attack of pertussis or measles in which the child recovers imperfectly, the cough persisting, the temperature remaining above normal and the child failing to regain in the proper time its former health should make one suspicious of the development of a possible previous latent tuberculosis

In these subacute cases, while the pulmonary symptoms are often present from the beginning of the illness, cases are not infrequent in which a gradual loss of weight and strength precede for a month or six weeks the development of the lung symptoms, or at least during this month or six weeks the cough is comparatively slight and spasmodic in type, resembling more or less the cough of pertussis

In these cases the fever usually rises, the pulmonary symptoms progress the cough increases in amount and the child continually loses in strength and weight, respiration becomes more rapid, the pulse increases in frequency and indigestion resulting from the child's weakened physical condition, helps still further to reduce its vitality Hemoptysis is rare, and the severe diarrhea with abdominal pain and tenderness indicating a high degree of tuberculous enteritis is also rare Dropsy is occasionally met with, and when present usually indicates that the child's death is not far distant Toward the latter part of the disease anemia becomes marked and nephritis, due to amyloid degeneration of the kidneys, may develop The following case seen in consultation February 15, 1906, with Dr Waldo F Sawyer, Vineland, N J, represents this type of illness

CASE 1—Oscar K., aged 5, was breast fed until 11 months He had pertussis at the age of 3 months and measles at the age of 1 year He made good recovery from both There was a maternal family history of tuberculosis

Examination—In the past three and one half months he has lost 11 pounds, present weight, 29 pounds He coughs very little except after eating The cough is distinctly spasmodic, resembling pertussis There is continued fever, present temperature, 101 F There is marked enlargement of cervical glands and impairment of resonance in upper portion of right axilla with broncho vesicular breathing There are physical signs of bronchitis in left lung

Diagnosis—Subacute tuberculosis, infection through respiratory tract, tuberculosis of the lymphatics of the neck, of the glands at the root of the lung, subacute tuberculous bronchopneumonia of both lungs

Acute Cases—The acute cases show tuberculous deposits scattered over and in both lungs and miliary tubercles in both lungs, and in addition a simple bronchopneumonia Symptoms in these cases closely resemble symptoms of ordinary bronchopneumonia non-tuberculous in type The fever is irregular, 100 to 104 F, the cough gradually increases in severity, the pulse is rapid, there is distinct dyspnea, the child rapidly loses in weight and strength and dies with all the evidences of steadily increasing weakness, and progressive development of the lung symptoms or perhaps death is due to a tuberculous meningitis The lungs show a diffused bronchopneumonia with scattered areas of consolidation

The following case also shows the difficulties often met with in arriving at a positive diagnosis of tuberculosis

CASE 2—On Feb 18, 1906, I saw in consultation with Dr Lowenburg the child of Dr C Patient was a boy, aged 2, well developed and had always been in good health His only trouble was chronic constipation, from which he had suffered almost continuously since birth For a month before I saw him he had continued fever of a mild type except during the ten days preceding my visit, when the temperature had reached 105 daily, with 103 as the minimum

Examination—His mind was clear, his pupils normal, he complained of no headache, had a slight cough, his tongue was coated, he took his nourishment fairly well Bowels, as usual, were constipated Lymphatics of neck and inguinal lymphatics were enlarged, upper middle portion of left lung anteriorly showed an area of impaired resonance about as large as a silver half dollar His breathing over this area was harsh A blood examination showed no evidences of malarial organisms A Widal taken three days previously was negative Leucocytosis, 20,000

Diagnosis—It was difficult to make a positive diagnosis Typhoid fever was excluded by second Widal Autointoxication of gastrointestinal origin seemed hardly probable in view of the fact that the boy had always been constipated Malarial fever was excluded and the diagnosis seemed to rest between a tuberculosis and a central pneumonia Forty eight hours later the temperature dropped to normal and remained normal the drop of temperature being preceded a few hours by a fall in the leucocytosis to 7,000, apparently confirming the diagnosis of pneumonia

It is often extremely difficult in the earlier stages and in the latent period of tuberculosis to collect sufficient evidence on which to base a positive diagnosis Each case must be considered and studied separately If the child is strong tuberculosis is not so likely as in one that has been frail and delicate The possibility or probability of infection should be considered Has the child lived in hygienic or unhygienic surroundings? Has its life been such as to expose it often to tuberculous infection? Has it lived in a house where a previous case of tuberculosis existed? Have there been any previous signs or even suspicions that the child has been tuberculous, as shown by its lymphatics, hip-joint disease and tedious convalescence from any illness as typhoid pneumonia, pertussis or measles?

Protracted cases of bronchopneumonia of the subacute type followed perhaps by chronic inflammation of the connective tissue of the lung, may be difficult to diagnose from cases of subacute tuberculous bronchopneumonia In a tuberculous form the lung symptoms may not be present from the onset of the disease, and wasting and loss of strength are usually more marked than in simple bronchopneumonia When bronchopneumonia shows a tendency to persist beyond the usual period the possibility of its being tuberculous should be considered, and if the process is tuberculous, the fever, cough and emaciation are usually progressive Bronchopneumonia is more often found at the lower back part of the lungs, tuberculosis at the upper portion

Leucocytosis is usually absent in tuberculosis, unless we have a case of mixed infection The leucocytes are, however, relatively high in infants Digestive leucocytosis must also be taken into consideration There is leucocytosis commonly in septic conditions, diphtheria, pneumonia, and this is of importance in summing up the evidence against the case being tuberculous Leucopenia is commonly seen in tuberculosis and malaria, also in uncomplicated cases of typhoid fever, and if the diseases in which the number of white cells is usually diminished can be excluded with the exception of tuberculosis, it may assist in deciding the case to be of a tuberculous character Blood cultures are often of distinct advantage in a doubtful case, 5 c c of blood should be secured and agar cultures made, preferably 1 c c of blood in five different agar tubes This may, of course, fail, but, on the other hand, it may be of advantage in establishing a differential diagnosis from pneumonia or typhoid by showing the presence of the pneumococcus or the typhoid bacillus

Chlorosis often presents a picture resembling closely tuberculosis of the lungs and lymphatics The anemia may be present in a marked degree early in the tuberculosis, in fact, before the lungs or glandular symptoms are observed According to Hayem, a true chlorosis may co-exist with a latent tuberculosis The finding of tubercle bacilli in the sputum or stools, fever, progressive loss in weight, and a family history of tuberculosis, with perhaps the history of exposure to tuberculous infection, may enable one to make the diagnosis Occasionally it is almost impossible to decide whether or not a tuberculous element is present and producing the anemia

Inoculation experiments of glandular substance are often of aid in a differential diagnosis, and in the more chronic types of the disease may decide the tuberculous nature of the illness The inflammation and caseation of a few tuberculous mesenteric glands may be occasionally shown by local tenderness or pain on pressure

Again, tuberculous infection of the cervical lymph glands is very uncommon under 3 years of age In fact, the younger the child the less likely are the enlarged lymphatics of the neck to be tuberculous To this rule, however, there are exceptions, a case of tuberculous cervical adenitis in an infant of four months being recently reported by Dr L E LaFetra

In a doubtful case presenting skin eruptions the tubercle bacillus has been recovered from the eruption, as in a case recently reported by Dr Irving Snow of Buffalo The failure of young children to expectorate, as they swallow the expectoration as soon as it is coughed into the pharynx, makes the sputum in these cases extremly difficult to obtain This can be overcome by passing a soft rubber tube well in the esophagus and examining the adherent mucus for tubercle bacilli

The examination of the fluid removed by lumbar puncture will often aid in the establishment of a diagnosis I have used tuberculin very little, as an irregular fever, not infrequently seen in young children, renders its use of doubtful value in many cases

In closing I do not wish to be understood to be put on record as implying that the diagnosis of tuberculosis is as a rule difficult in the advanced stages of the disease, but this paper is presented because I am often asked to decide as to the presence or absence of tuberculosis when the symptoms are vague and indefinite In these cases the diagnosis is often obscure, and I hope the discussion of this paper may perhaps throw some light on the differential diagnosis in children in whom the symptoms of tuberculosis are vague and indefinite

(*Continued on page 1586*)

Special Article

CAP AND GOWN IN MOLIERE

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In the "*Malade Imaginaire*" Béralde, who is the mouthpiece of Molière, says to Argan, the imaginary invalid "Yes, you have but to speak with a gown and cap and any gibberish becomes learning, and any nonsense sense , and Toinette, the rollicking maid servant, hastens to add 'There, sir, if it were only for your beard, that goes a great way already, for the beard makes more than half the physician Béralde is attempting to persuade his brother Argan to become a physician in order to cure him of his infatuation for physic and the physician But Argan, simple minded and credulous imagines that in order to be a doctor it is necessary 'to study, to know Latin, to understand the diseases and the remedies to apply," an idea that Beralde ridicules assuring him that he already knows as much as the average physician without ever having studied medicine and that cap and gown take the place of learning Argan finally yields, and he is made a doctor by a friendly faculty, after a farcical examination for which he is coached

I had always regarded the famous scene of the reception of the Imaginary Invalid as pure burlesque and also as a gross libel on the medical profession of the XVII century until Reynaud's "*Les Médecins au temps de Molière*" fell into my hands Reynaud informs us that the famous scene is by no means pure fiction that the France of Molière abounded with friendly faculties of whom a diploma carrying with it the right to practice, might be had almost for the asking; and, still worse that Montpellier, one of the oldest and most
faculties of Europe
was a common sayi
only be obtained
experience that

you devoted to the study of medicine "about the time it takes young birds to get their feathers" It also appears that the graduates of that faculty set up in practice at Paris, where they were arrested and prosecuted for illegal practice A battle royal between the two faculties followed, which ran through several decades and compared to which our modern struggles with the diploma mills and their output sinks into insignificance In fact, a parallel for the virulence and ferocity that characterized this professional struggle of the XVII century can be found only in the religious fanaticism of the period In two respects, the famous controversy resembles that precipitated by modern boards of medical examiners as soon as they undertake to enforce the law—the Paris faculty was supreme within that jurisdiction, and in addition to invoking the law, which required of every practitioner an examination before the faculty after a full course of instruction, the faculty saw fit to go behind the foreign or provincial diploma

Montpellier and the accused invoked the famous *ubique gentium*, the right to practice anywhere on earth conferred by her diploma and derived from the Papacy, and answered the charge of fraud in the procurement of her diploma by arrogantly pointing to her announcements But, despite the protest and outcry of the proud alma mater, the fact remained that in numerous instances the cathedral bells had announced the elevation of an ignoramus to the degree of doctor There had been an examination, but it was as farcical as that of the *Malade Imaginaire*, or, like Argan, the candidate had been coached for the occasion The president of the faculty, a man of learning and repute, had seated the newly made doctor alongside of him, had bestowed on him the traditional ring, the golden belt and the red gown lined with ermine, and given him a light blow on the cheek, in token that he was henceforth a free man, which Molière, with his genius for satire turned into a license to purge, inject, bleed, cut and kill anywhere on earth Yet as a matter of fact, all these honors had been conferred on an untutored and unlearned person The worst feature of the whole farce was that the president, in his address of welcome, following the time-honored custom, had insisted on the importance of admitting to the profession only learned and worthy persons

In his first manuscript of *Le Malade Imaginaire*, Molière had called the candidate worthy alumnus of Montpellier, but finally laid the scene of the reception nowhere It properly belonged to no age nor country, no more than did the imaginary invalid or Monsieur Purgon, for the friendly faculty is immortal Molière might just as well have placed the scene in Germany, for instance, where they had the *doctores bullotti*, doctors by the grace of the authorities, where in more than one university the student might live at the Brocken or Auerbach's Cellar and, provided he had paid the fees, receive the coveted M D He did not go through on the skirts of Marguerite but on the long training gown of the rector magnificus

But what mattered it how the title had been procured or how ignorant the recipient might be The cap and gown were symbols of learning and skill and, provided he spoke with authority and assurance, all men had confidence in the wearer, besides, had not a learned faculty solemnly certified to his learning and ability? We have in Goethe the picture of Faust disgusted with the barren erudition of the schools discarding his academic gown, and Mephistopheles attired in the livery of the master, receiving the student in his study Picturesque, but unreal scene! The Faust of Goethe is Goethe himself, the philosopher who breathes the spirit of the XVIII century, not the XVI The real Faust did not resign, nor did Mephisto or Wagner succeed him He did not despise the learning of the schools, nor did every midnight find him pouring over dusty manuscripts or the sacred writings, as in the drama of Goethe On the contrary, many an evening found him with the students at Auerbach's Cellar and Easter morning saw him on his way to church The respect of the multitude is not treated with contempt, as in the tragedy Faust wore the academic cap and gown as proudly as ever knight bore sword Subject of an omnipotent prince, he obeyed his behests, and when some rich or powerful patron solicited the coveted sheepskin issued, armed with the academic seal and the signatures of the whole body of the faculty

The reception of Argan reads like a chapter from the history of medical education in the United States prior to the eighties, when the state bowed to the alma mater and honored her credentials without examination The friendly faculty is directly responsible for the existence of boards of examiners, and these boards are responsible for the death of hundreds of diploma mills One has only to consult "Polk's Medical Directory" for 1902 in order to see their tombs If the state medical societies were to write the epitaph, it would doubtless be *requiescat in pace* Their alumni make it *resurgam* They keep the memory of the dead alma mater green and at every session of the legislature their prayers for her resurrection are heard The legislature has the power to raise the dead, but the power is invoked in vain

Thanks to boards of examiners, it is necessary in the United States to study in order to be a doctor The state has not the monopoly of medical education as it should have, and as it has in the country of Molière The faculties still confer degrees but the state alone grants the license, and only after an examination before its own sworn servants Cap and gown are still recognized, but they have lost their ancient magic. The state looks behind the trappings for the man, and rightly so, for what assurance have we but the license that cap and gown are not borrowed livery, or the gift of a friendly faculty, or of a too indulgent mother We, too, have our Montpelliers

Medicine physician and patient, occupy easily the first place in the works of Molière If one will visit his neglected gallery —I say neglected, for who to day reads *Le Malade Imaginaire*, *Tartuffe* or *Le Misanthrope*— one will see *Le Médecin Volant*, an ignorant valet, attired in the long trailing gown and the pointed cap of the then physician, duping a wealthy bourgeois, *Le Médecin Malgré Lui*, a drunken woodchopper and wifebeater, whose only license was a beating, and his dupe, another bourgeois even more credulous than his brother Alongside of the immortal Tartuffe, hypocrite and impostor, are seen Tomès, Macroton, Desfonandres and Bakis, the four physicians of *L'Amour Médecin* They disagree and quarrel Further on, doctors and apothecaries, syringe in hand, pursue Monsieur de Pourceaugnac, who does not care a straw for physic and refuses to be purged and bled Next to the proud figure of the Misanthrope appears the equally haughty Monsieur Purgon, who menaces the trembling Imaginary Invalid with a host of diseases, abandoning him to the "feculence of his humors and the corruption of his blood," because he has had the audacity to refuse to permit Monsieur Fleurant, the apothecary, to administer the enema prepared by Purgon's own hands, which was to evacuate and expel all the peccant humors The gallery ends with *Le Malade Imaginaire*, the masterpiece of humor and satire, in which the author philosopher, already sick unto death from an aneurism, seems to gather, for a final onslaught on the physician and his art, all the sharp pointed shafts, which, from his early youth, he had been continually hurling at both

The Imaginary Invalid is also the last of the comedies to be acted by the author actor Molière was playing the part of Argan in the fifty second year of his age, had spoken the famous Juro the oath of allegiance to the faculty, when he was unable to proceed, and was shortly afterward carried to his luxurious abode, a dying man The "Rival Doctors" and the "Doctor in Love," works of his early youth are unfortunately lost We are denied the pleasure of seeing the doctor make love Molière doubtless made him as ridiculous as young Thomas Diaphorus who presents Angelique, his intended, with his thesis against the circulators, and breaks down in the middle of a studied and absurd compliment to her step mother We probably have the "Rival Doctors" in the quarreling physicians of *L'Amour Médecin*

Molière believed he had a mission to perform on earth, the mission being that of the comedy, in his words, to correct the vices and the follies of mankind. One of these follies was our faith in the physician and the art of medicine That art, declares Béralde, is an amusing mummery Béralde is Molière Wherever in the comedies contempt is expressed for the physician and his art, and the passages abound, it is the contempt of Molière The Shepherdess in the *Malade Imaginaire* sings the philosophy of France's first literary genius and the world's greatest writer of comedies

> Ignorant doctors,
> Your highest knowledge is but pure chimera
> Those uncertain remedies of which the simple people
> Think that you know the admirable virtue,
> Cannot cure the ills I feel,
> And all your gibberish can be received
> Only by an Imaginary Invalid.
> Your highest knowledge is but pure chimera,
> Vain and little informed doctors, etc

Strange and unnatural refrain for a shepherdess!

It is a common mistake to believe that Molière's satire is directed against the quacks Molière portrays but one physician, the member of the faculty Call him the licensed physician if you wish The word charlatan is not to be found in his pages, unless it is the *opérateur* of the Pont Neuf, who sells orvietan One is very apt to think the thesis of young Doctor Diaphorus in the *Malade Imaginaire* is aimed at the quacks But *circulateur* does not signify itinerant, but circulator, i e, one who believes in the circulation of the blood That young gentleman, like every member of the faculty, took an oath never to consult with an unlicensed practitioner and to give him no quarter generally In reality, like his fellows, he left the task of the prosecution to the strenuous dean of the faculty, contenting himself with writing a thesis against the partisans of Harvey, whom he regarded as fully as pernicious to mankind as the quack The physician of Molière is a pedant, not a charlatan

Van Laun, one of Molière's translators, has it that no two of his physicians are exactly alike It is difficult to see wherein they differ, for all are insufferable pedants, vain and ignorant pretenders, and all speak gibberish and nonsense It is the gibberish of the period, the nonsense of Galen and the humoral theory of disease

The reason for Molière's deep aversion and bitter antipathy for the profession has often been sought Reynaud advances the hypothesis that the author of the *Malade Imaginaire* was the original of that character, and that he bore the profession a grudge because of its failure to cure Molière I confess I cannot reconcile myself to the idea of Molière being a hypochondriac Antipathy to physic is natural to many men My own father, college professor, with two sons in the profession, carried the prejudice to the grave, dying at fifty two of pneumonia, and refusing to the last to have a physician or to take any drug Montaigne's antipathy is as deep as Molière's, and he claimed it was hereditary But some little suspicion attaches to both of these great writers Montaigne, in the throes of nephritic colic, calls a physician, but merely for his agreeable conversation, he claims Molière when ill, sends for Mauvillain, but writes Louis XIV that he did not take his remedies and recovered While it might not be fair to accuse the author of the essays of suffering himself to be copiously bled or of swallowing rat's excrement for his stone, or Molière of being the slave of Purgon and Fleurant, or of permitting himself to be prostrated with Mauvillain's antimonial wine yet, after all, is not the philosopher who, when seriously ill sends for the esculap quite as suspicious as the sceptic who, when in extremis, calls a spiritual adviser?

The philosophic reason for the hostility of Molière is to be found, I believe, in the dialogue of Béralde and Argan, which covers an entire scene and is a complete disquisition on the subject of medicine In this scene Béralde (and Béralde is Molière), pretends that it is ridiculous for one man to undertake to cure another, and, when Argan inquires the reason for this singular opinion, Béralde replies "For the reason, brother, that the springs of our machinery are a mystery, of which, up to the present, men can see nothing, and that Nature has placed too thick a veil before our eyes for our knowing anything about it" This then is the reason why, in the opinion of the author, "medicine is an amusing mummery, and the whole excellence of the physician s art consists in a pompous gibberish, in a specious verbiage which gives you words instead of reasons and promises instead of effects" This is why Argan and the mock physicians of Molière, ignorant valets and clumsy louts, are, in his opinion, quite as learned and skillful as the Purgons and the Diaphoruses

Almost any modern physician will admit that it is ridiculous for one who is ignorant of the fundamental principles of physiology to undertake to cure another, in fact, that it is not only ridiculous but criminal as well The error of Molière was not in holding up to ridicule the physician of his century, but in believing that Nature had forever hidden from human eyes the springs of our existence. He believed, and indeed was always saying, that Nature was the great healer and that in sickness it was necessary to do nothing but to keep quiet Our natural impatience, our morbid fear of pain, disease and death, made us the natural dupes of the physician Excellent advice, perhaps, for his own time Were it not for the universal ignorance of the time and the evident good faith of the then physicians, one might be tempted to assert that it would have been better for France and all the worse for her enemies had Louis XIV banished the bleeders and the antimonialists of his kingdom instead of the Huguenots

Molière believed that he had portrayed the physician of all ages In reality he painted only the physician of the XVII century, and French at that France had no Harvey no Sydenham, and Molière did not recognize the revolution already begun by Harvey before he had penned his first line, revolution that was destined to overthrow Galen and the faculty, probe the secrets of Nature and thus make it possible for one man to cure another, which was to strip the physician of his ridiculous attire, rid him of his barren pedantry, his pompous gibberish and specious verbiage And yet there is little doubt but that Moliere aided this same revolution by holding up to ridicule a system of medicine based on a primitive and absurd anatomy, physiology and pathology

That you have only to speak with a gown and cap, and any gibberish becomes learning and any nonsense sense, is a truth as old as the art of medicine itself, as ancient as man himself, and probably as eternal No author has illustrated this truth half so well as Molière It furnishes the theme of two delightful little farces, *Le Médecin Volant* and *Le Médecin Malgré Lui* and of one comedy *L'Amour Médecin*

In the *Médecin Volant*, the patient is a young girl who in order to escape a marriage to the man of her father's choice, feigns illness The lover, to gain access to the closely guarded object of his passion, dresses up his valet, a clumsy ignorant lout, in the conventional attire of the physician, and the mock doctor is introduced to the credulous parent as a man of extraordinary learning and skill Sganarelle, the "Flying Physician," like all charlatans blows his horn loudly He is "the greatest, ablest and most learned physician in the whole vegetable, sensitive and mineral faculty, and possesses peculiar talents and secrets beyond the ken of other physicians, who compared with himself, are but abortions of doctors', and he proceeds to impress the father of the patient with his learning Here is a specimen of the gibberish that passes for learning in the latter's eyes, because it comes from one who wears the cap and gown

> "Salamalec, salamalec Rodriquez, have you a heart?
> Signor, si, signor, no *Per omnia secula seculorum*"

Sganarelle cannot even write, and he betrays his ignorance when, desiring to write a prescription, he inquires if any one present can write But his ready wit, so characteristic of the successful charlatan and the utter blindness of the dupe saves him, for, seeing his mistake, he feigns hurry and rush of practice The ruse of the lovers is completely successful Sganarelle orders plenty of fresh air for Lucinde who, once out of sight of an unsuspecting father, elopes with the man of her choice

In the course of the comedy, Molière, by a master stroke of satire introduces a lawyer to Sganarelle and makes him pay his compliment, couched in impeccable Latin and ornamented with the appropriate aphorisms of Hippocrates to the medical profession and to the fakir who wears its livery The ass s ears are only too apparent in Sganarelle The lawyer, however sees nothing but the professional attire His friend Gorgibus has extolled the l arn [illegible] ir But, perhaps after all, the lawyer is not t [illegible] may have recogn [illegible] moc [illegible] defence of [illegible] arr [illegible] itself [illegible] be [illegible] he had prescribed neither bleeding, nor purgative, nor enema, had written no prescription, prescribed no drug or medicine, but merely a walk in the garden, and fresh air? He had not even exacted a fee, for the money placed in his palm by Gorgibus when it was behind his back was simply a present No relation of physician and patient had existed, for the illness of Lucinde was feigned Sganarelle had not violated the medical law, for it was intended only to apply to those who bled and purged their patients or prescribed drugs Sganarelle had only prescribed a walk in the garden, and fresh air He was not a physician, but a naturopath A defense altogether modern, it might be said In reality, it is as old as Hippocrates and Galen, though probably not so successful with the ancients as with the moderns

The *Médecin Malgré Lui* is a drunken faggot binder, his only license being the beating he receives at the hand of the lover, who, in order to elude the vigilance of the father of the young girl he wishes to marry, dresses him up in the cap and gown of a physician, and passes him off as a man of skill Sganarelle, the physician in spite of himself, is superior in intelligence and education, and also in roguery, to his namesake the flying physician He went as far as the sixth grade at school and once worked for a physician Géronte, his dupe, is also the superior of the victim of the flying physician

It is difficult to say in which of the two comedies the fraud is more palpable and the credulity deeper, for, in both, the bounds of credulity seem to be almost exceeded, if, indeed, human credulity has either circumference or center The coarseness and vulgarity, the gibberish and nonsense of the physician in spite of himself are palpable enough They *sautent aux yeux*, as the French say, yet he passes for a physician of rare merit. He wears the professional cap and gown and has been introduced to his dupe as a man of renown

Sganarelle invokes Hippocrates and Galen and has a smattering of Latin bad as it may be This last possession is sufficient to stamp him as a prodigy Lincoln says in one of his letters that, in his youth, if a man who knew a few words of Latin came into his part of the country, the wilds of Kentucky, he was immediately set down as a wizard Molière makes the country people flock to Sganarelle In Don Juan, in which the first reference to the subject of medicine occurs we find Sganarelle the clownish valet of Don Juan disguising himself in the attire of a physician the better to escape his pursuers, and being forced to prescribe for the country folk What more complete disguise could have been invented than an attire which commanded the respect of all mankind? The valet of Don Juan tells his master that he prescribes the first thing that comes into his head The Physician in Spite of Himself, consulted by a peasant whose wife is ill with the dropsy picks up a piece of cheese and gives it to him and when the peasant refuses to take it, Sganarelle declares that the cheese is a specific composed of gold, coral, pearls and other precious things, at which the peasant eagerly seizes it Géronte, the dupe of Sganarelle, the mock physician, swallows any kind of nonsense The cap and gown of the quack lull his suspicions to sleep But let us look at the nonsense and the gibberish that pass for reason and sense Sganarelle begins by citing Hippocrates and Galen, but in the most absurd manner

Sgan (In a physician's gown with a very pointed cap) Hippocrates says—that we should both put our hats on

Géronte Hippocrates says that?

Sgan Yes

Géronte In which chapter, if you please?

Sgan In his chapter—on hats

Géronte Since Hippocrates says so, we must obey

Sganarelle discourses and reasons after the fashion of the physicians, but gets terribly mixed in the peccant humors and their exhalations His pathology is fearfully embarrassed, but he saves himself by taking refuge in a flood of hog Latin His anatomy is still worse, for he places the heart on the right and the liver on the left, but, when Géronte protests at his singular mistake, Sganarelle calms him with the assurance that *nous avons changé tout cela* "The heart was formerly on the left the liver on the right side, but we have changed all that and we now a days practice the medical art on an entirely new system"

Géronte I did not know that and I pray you pardon my ignorance.

Sganarelle There is no harm done, and you are not obliged to be so clever as we are.

Sganarelle prescribes no drug, smells no urine, inspects no stool He gives Lucinde, who feigns dumbness, bread soaked with wine, and, pressed for an explanation by her father, who demands reasons for diagnosis, prognosis and therapeutics, replies

Sgan Do you not see that they give nothing else to parrots, and that, by eating it, they learn to speak.

Géronte That is true Oh, the great man! Quick, plenty of bread and wine

In order to facilitate an elopement, Léandre, the lover, dresses up as an apothecary and, when he regrets that he does not know half a dozen big medical words, Sganarelle insists that the dress is enough and points to his own renown in the neighborhood Thanks to the cap and gown, the lovers elope

In the sparkling piece of comedy and satire, *L'Amour Médecin*, the patient is again a young girl kept under lock and key by a doting and credulous father The mock physician is the suitor himself Lucinde has fainted repeatedly in the arms of her conniving nurse, who declares that she will not live out the day Her anxious father sends post haste for four physicians, who disagree, quarrel and give him but little hope. The lover disguises himself as a physician, gains admittance to the house and diagnoses Lucinde's complaint as the result of a disordered imagination and an inordinate desire for matrimony, a diagnosis eminently satisfactory to her father The mock physician poses, of course, as a doctor of renown He cures by means of words, signs, tokens and rings, and promises to cure Lucinde of matrimony on the brain by humoring her imagination, taking her at her foible and making her believe him her suitor, a capital ruse and an immense joke in the eyes of her father Valère, by means of his clever system of therapeutics, declares his undying love for Lucinde, bestows a ring and actually makes her deluded father send for a notary, before whom a marriage contract is drawn up and signed Musicians and dancers then appear, for the alleged purpose of dispelling the patient's gloom, in reality, however, to celebrate the nuptials The chorus sings Molière's contempt for physic. In the midst of the festivities, bride and groom depart, leaving the enraged father to realize how completely duped he has been by the simple device of a physician's cap and gown worn by a clever, but unwelcome, suitor

Purgon has changed. He no longer, as of yore, speaks gibberish and nonsense, but, knowing the springs of the human machine, is able to diagnose and cure disease, and he no longer wears the long trailing gown and pointed cap immortalized by Molière He is still wedded to his profession, but has largely divorced himself from drugs and does his utmost to cure Argan of the habit Like Molière, his great critic, Purgon now prescribes the comedy, laughter and the sports But Argan, the imaginary invalid, and Gorgibus and Géronte, the wealthy bourgeois, are forever the same Despite the prodigious progress of the medical art and the ever widening gulf that separates the licensed practitioner and the fakir, despite the eternal warnings of Purgon, who stands between them and the thousand and one charlatans, professional and lay who prey on them, like so many harpies, to the ruin of their health and purse, any gibberish still passes in their eyes for learning and any nonsense for sense

The Sganarelle of Molière speaks with gown and cap To-day, Sganarelle, even without these trappings, numbers his dupes by the thousands The dupes of Molière seem to have emigrated to the United States They are worth millions of dollars annually to the great American "patent medicine" Trust and its criminal ally, the newspaper

We need to be delivered from the medical Tartuffe, for, in respect to medicine, the great mass of the people is still as ignorant and credulous as the dupes of Sganarelle And the remedy is not the comedy, but the sword of the state It is not sufficient to operate on the minds of men, after the fashion of Molière, Paine, Jefferson and other philosophers It is necessary to operate on the bodies of the charlatan and his allies In the immortal comedy of Molière, no amount of reason or persuasion suffices to deliver Argan from Tartuffe, the religious hypocrite and impostor, who despoils him It is the virtuous prince, the enemy of fraud, that we need, the heavy hand of the law and the stern face of the magistrate

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Clinical Notes

REPORT OF TWO CASES OF EXOPHTHALMIC GOITER IN MEN

D A VANDERHOOF, B L., M.D
BYRON, ILL.

CASE 1—C M, a man, aged 47, was born in northern Illinois

History—His family history contains nothing of special interest. The man is a carpenter and has been a hard worker all his life He is the father of 14 children, 13 of whom are living They are all healthy and in good physical condition The patient has always been of a rather nervous temperament, and says that this condition has been growing worse during the last five years, although he managed to keep up his work until the fall of 1904 During the last few years he has also been troubled with muscular rheumatism in his limbs, badly at times although this seemed to depend to a great extent on atmospheric conditions Otherwise he has always been normal both physically and mentally as far as is known

Examination—He came under my observation during January, 1905 He said that for some time past he had been "doctoring" for nervousness, but had been steadily growing worse His weight in January, 1904, was 180 pounds, at the time I examined him first he weighed 111 pounds He was emaciated in appearance, and his gait was quick and jerky There was no exophthalmos present, and both lateral lobes of the thyroid gland were so slightly enlarged that they were not noticeable except when the head was thrown back Vision was normal Tachycardia was very prominent, the pulse varying between 140 and 160, the arteries of the neck throbbed forcibly and pulsation of the abdominal aorta was also very marked Capillary pulse could be plainly seen The tremor in this case was so marked that it was almost impossible for the man to drink without spilling the contents of a cup, although only partly filled His appetite was exceedingly good, as a usual thing, bowels were slightly constipated At this time he was complaining of hot flushes and profuse perspiration, especially after retiring for the night The perspiration was so profuse some nights that in the morning it became necessary to change all the bedding Expectoration was frequent and frothy, a slight hacking cough was also present Albumin and sugar were both absent from the urine

Treatment—I put him on a solution of ammonia, citrate of iron and sodium bromid, three times a day I also gave him strychnin gr ¼, four times a day Over the goiter itself I used an ointment consisting of red mercuric iodid gr vi, potassium iodid gr xxx, olive oil dram i wool fat (lanolin) ounce i, which was applied freely with friction A galvanic current was used daily The above treatment I continued for three weeks, hoping that I could get the man in condition for an operation At the end of this time his condition was only slightly improved, so I stopped the strychnin and put him on thyroidectin, 5 grain capsules, one capsule three times a day I also continued the use of the other medicines An ice bag was also used over the pericardium night and day For about a week I noticed no improvement, but at the end of this time slight changes were noticeable The tachycardia began slowly to disappear, and at the end of about two months his pulse ranged from 95 to 110 The tremor became less noticeable but never entirely disappeared The forcible throbbing of the arteries of the neck also disappeared to a great extent The flushes of heat and profuse perspiration entirely disappeared although during the last few months they have been present occasionally The enlarged gland has slowly decreased in size till it no longer can be seen The thyroidectin was then discontinued and the patient put on general tonics About July 1 he wanted to go to work again, but on trying it found himself too weak, the fine tremor of his hands was still present Arrhythmia developed shortly after his being about Some days he would feel very well and be up around the house, but suddenly his pulse would become irregular and it would be necessary for him to lie down, even then it would be difficult for him to breathe I again put him on strychnin, iron and digitalis, and after Oct 1, 1905, he did not complain of the above condition again

Result—At present he feels very well so long as he does not work, but as soon as he tries to work he becomes tired and nervous This condition may entirely disappear in time

CASE 2—M, a man, aged 36, family history negative

Personal History—There is nothing in his personal history of interest up to the present except that he has always been of a very nervous temperament

Examination—I first saw him during the winter of 1905 He appeared to be well nourished, although he claims to have lost considerable flesh during the last few weeks His pulse averaged 120 Pulsation of the carotids, abdominal aorta and capillaries was present, and he said it was impossible for him to sleep at night because of the hard beating of his heart The thyroid gland was greatly enlarged and hard There was no exophthalmos The von Graefe sign was absent. He had been perspiring profusely of late, and thought this had weakened him considerably He complained of indigestion a great deal The urine and blood were negative, as also the abdominal and thoracic organs

Treatment—I put him on thyroidectin, gr xv a day, with strychnin sulphate gr 1/30, three times a day His improvement was very rapid and in two months he was able to work as hard as ever

Result—The pulse at present is only slightly above normal The thyroid gland is almost normal in size and the man feels very well indeed The profuse perspiration has also entirely disappeared, he sleeps well and his appetite is normal

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THE ACCESSORY NASAL SINUSES AND PNEUMOCOCCUS INFECTIONS

A PRELIMINARY COMMUNICATION

SAMUEL T DARLING M D
Pathologist Ancon Hospital
ANCON, ISTHMUS OF PANAMA

This communication contains some of the results of an investigation which is being conducted to determine the relation of inflammations of the accessory nasal sinuses to pneumococcus infections

Up to this date, July 21, 1906, the accessory sinuses have been examined with regard to this point in 52 autopsies, 37 of which were pneumococcus infections as follows Lobar pneumonia, 22, acute pericarditis 1, acute meningitis 9, pneumococcus septicemia 5 The remaining 15 cases were controls

It has been found that 92 per cent of all pneumococcus infections coming to autopsy show in a very marked degree more or less typical pneumococcus inflammation of one or more of the accessory nasal sinuses The inflammation is generally intense It is fibrino-purulent in character, fibrin and mononuclear cells being abundant Pneumococci are always present and in numbers depending on the duration of the process A point of great importance is the age of the sinus affection which has been appreciably greater than that of the lung or meningeal lesion

Ninety-one per cent of the lobar pneumonia cases showed a sinusitis

All cases of acute pneumococcus meningitis pre[illegible]nted an inflammation of [illegible] or more of the sinuses and in every [illegible] ells were normal

In [illegible] 80 per cent

w[illegible]

TABLE 1 —PNEUMOCOCCUS INFECTIONS OF THE ACCESSORY NASAL SINUSES

Number	Diagnosis	Date of Autopsy	Maxillary Sinus R	Maxillary Sinus L	Ethmoidal Cells R	Ethmoidal Cells L	Sphenoidal Sinus R	Sphenoidal Sinus L	Frontal Sinus R	Frontal Sinus L	Meninges	Middle Ear and Mastoid Cells	Lungs
464	Lobar pneumonia	July 1	†	0	†	0	0	0	0	†	Normal	Not examined	Lobar pneumonia
468	Lobar pneumonia	July 3	†	†	0	0	0	†	0	†	Normal	Normal	Lobar pneumonia
469	Lobar pneumonia	July 3	0	†	0	0	0	0	0	0	Normal	Normal	Lobar pneumonia.
472	Lobar pneu, compl. parotitis, right	July 4	†	0	0	0	†	0	0	0	Normal	Normal	Lobar pneumonia
473	Lobar pneu, compl malarial fever, e a.	July 5	†	0	**	**	0	0	0	0	Normal	Not examined	Lobar pneumonia.
476	Lobar pneumonia	July 7	0	0	0	0	0	0	0	0	Normal	Not examined	Lobar pneumonia
478	Lobar pneumonia compl uncinariasis	July 9	†	†	0	0	0	0	0	0	Normal	Not examined	Lobar pneumonia
480	Lobar pneumonia	July 11	0	†	*	*	*	*	*	*	*	*	Lobar pneumonia.
481	Lobar pneu., compl malarial fever, e a	July 11	0	0	0	0	0	0	0	0	Normal	Not examined	Lobar pneumonia
486	Lobar pneumonia	July 13	†	0	0	0	0	0	0	†	Normal	Not examined	Lobar pneumonia.
487	Lobar pneumonia	July 13	†	0	†	†	†	†	0	0	Normal	Not examined	Lobar pneumonia
488	Lobar pneumonia	July 13	†	†	†	†	†	†	0	0	Normal	Not examined	Lobar pneumonia
493	Lobar pneumonia dental caries, osteitis see note	July 16	†	0	0	0	0	0	0	0	Normal	Not examined	Lobar pneumonia
495	Lobar pneumonia acute pericarditis	July 17	†	†	0	0	0	0	0	0	Normal	Not examined	Lobar pneumonia
497	Lobar pneumonia	July 17	0	0	0	0	†	†	0	0	Normal	Not examined	Lobar pneumonia.
498	Lobar pneumonia aortic insufficiency	July 17	0	†	0	0	0	0	0	0	Normal	Not examined	Lobar pneumonia.
499	Lobar pneumonia	July 18	†	†	†	†	†	†	0	0	Normal	Not examined	Lobar pneumonia
500	Lobar pneumonia	July 18	0	0	0	†	0	0	0	0	Normal	Not examined	Lobar pneumonia.
503	Lobar pneumonia	July 19	†	†	†	†	†	†	†	†	Normal	Not examined	Lobar pneumonia
504	Lobar pneumonia	July 19	†	0	0	0	†	0	0	0	Normal	Not examined	Lobar pneumonia
505	Lobar pneumonia acute pericarditis	July 19	0	†	0	0	†	†	0	0	Normal	Not examined	Lobar pneumonia
508	Lobar pneumonia	July 20	0	†	0	0	0	0	0	0	Normal	Not examined	Lobar pneumonia.
344	Acute purulent cerebrospinal Meningitis (pneumococcus)	March 12	0	†	**	**	**	**	**	**	Meningitis	Normal	Normal.
386	Acute purulent cerebrospinal meningitis (pneumococcus)	May 3	†	†	**	**	**	**	**	**	Meningitis	Normal	Bronchopneumonia
388	Acute purulent cerebrospinal meningitis (pneumococcus)	May 5	0	†	**	**	**	**	**	**	Meningitis	Normal	Bronchopneumonia
406	Acute purulent cerebrospinal meningitis (pneumococcus)	May 18	†	†	**	**	**	**	**	**	Meningitis	Normal	Bronchopneumonia
446	Acute purulent cerebrospinal meningitis (pneumococcus)	June 17	†	†	0	0	†	†	0	0	Meningitis	Normal	Bronchopneumonia
449	Acute purulent cerebrospinal meningitis (pneumococcus)	June 19	†	0	0	0	0	0	†	0	Meningitis	Normal	Bronchopneumonia
461	Acute purulent cerebrospinal meningitis (pneumococcus)	June 28	†	†	0	0	†	0	0	0	Meningitis	Normal	Bronchopneumonia.
471	Acute purulent cerebrospinal meningitis (pneumococcus)	July 4.	†	†	0	0	†	†	†	†	Meningitis	Normal	Bronchopneumonia.
475	Acute purulent cerebrospinal meningitis (pneumococcus)	July 7	0	0	0	†	0	0	0	0	Meningitis	Normal	Bronchopneumonia.
506	Acute fibrino-purulent pericarditis (pneumococcus)	July 19	†	†	†	†	†	†	†	†	Normal	Not examined	Bronchopneumonia
383	Purulent arthritis acute pur meningitis (pneumococcus)	April 29	†	†	**	**	**	**	**	**	Meningitis	Normal	Normal.
438	Acute pur meningitis acute rachitis (pneumococcus)	June 11	†	†	0	0	†	†	0	0	Meningitis	Normal	Bronchopneumonia
433	Acute pur meningitis acute orchitis tonitis (pneumococcus)	June 13	†	†	0	0	†	†	0	0	Meningitis	Normal	Cirrhosis of lung
466	Acute pur menin acute pur arthritis lobar pneu pleuritis (pneumococcus)	July 2.	†	†	†	†	†	†	†	†	Meningitis	Normal	Lobar pneumonia
482	Meningitis arthritis endocarditis of tricuspid valve (pneumococcus)	July 11	0	0	0	0	0	0	0	0	Meningitis	Not examined	Lobar pneumonia

The sign † indicates a pneumococcus sinusitis
The sign 0 indicates a normal sinus

* Head section not made.
** Not examined

TABLE 2 —CONDITIONS OBSERVED IN CONTROLS

Number	Diagnosis	Date of Autopsy	Maxillary Sinus R	Maxillary Sinus L	Ethmoidal Cells R	Ethmoidal Cells L	Sphenoidal Sinus R	Sphenoidal Sinus L	Frontal Sinus R	Frontal Sinus L.	Meninges	Middle Ear and Mastoid Cells	Lungs
470	Anemia chronic malaria purulent arthritis (staphylococcus)	July 3	0	0	0	0	0	0	0	0	Normal	Not examined	Bronchopneumonia
474	Enterocolitis anemia, chronic malaria	July 5	†	†	0	0	0	0	0	†	Normal	Not examined	Bronchopneumonia
477	Amebic dysentery	July 6	0	0	0	0	0	0	0	0	Normal	Not examined	Normal
479	Malarial fever, e a	July 9	†	†	0	†	0	0	0	†	Normal	Not examined	Normal
483	Anemia bronchopneu chronic malaria	July 12	0	0	0	0	0	0	0	0	Normal	Not examined	Bronchopneumonia.
485	Epithelioma of tongue	July 13	0	0	0	0	0	0	0	0	Normal	Not examined	Normal.
489	Mastoiditis suppurative encephalitis	July 14	0	0	0	0	0	0	0	0	Pachymeningitis	Mastoiditis	Bronchopneumonia
490	Malarial fever e a.	July 14	†	†	†	†	†	†	0	0	Normal	Not examined	Normal
491	Amebic dysentery	July 15	0	0	*	*	*	*	*	*	*	*	Bronchopneumonia
494	Bronchopneumonia	July 17	0	0	0	0	0	0	0	0	Normal	Not examined	Bronchopneumonia
496	Acute nephritis	July 17	0	0	0	0	0	0	0	0	Normal	Not examined	Normal.
507	Malarial fever e. a.	July 19	0	0	0	0	0	0	0	0	Normal	Not examined	Edema.
509	Typhoid fever	July 20	†	†	0	†	0	0	0	0	Normal	Not examined	Capil bronchitis
510	Chronic dysentery	July 21	0	0	0	0	0	0	0	0	Normal	Not examined	Vesic emphysema
511	Amebic abscess of brain	July 21	0	0	0	0	0	0	0	0	Normal	Not examined	Bronchopneumonia

The sign † indicates a pneumococcus sinusitis
The sign 0 indicates a normal sinus

* Head section not made

The case of acute pericarditis is of interest because all the sinuses were involved, yet the meninges were normal and the lungs contained only small patches of bronchopneumonia

The controls were all other than pneumococcus infections just as they came to autopsy, and of these, 28 per cent had an acute inflammation of the sinuses

I believe that the portal of entry of the pneumococcus is in most instances an accessory nasal sinus, the mucous membrane of which is probably fitted for the reception of the pneumococcus by an antecedent influenza or rhinitis, instances of infection from a carious tooth being rare

On some of the cases a few comments will be of interest

473 —This was a case of malarial fever, e a , under treatment and developing lobar pneumonia during the 48 hours befor death At autopsy, from inspection and examination of smears, the stage was found to be that of red hepatization, whereas the character of the inflammation in the maxillary sinus was that of an older process

482 —Pneumococcus endocarditis of tricuspid valve

483 —Accessory median frontal sinus

489 —Encephalitis following mastoiditis, in which the accessory nasal sinuses were not involved by extension.

490 —The fluid in the sinuses was hemorrhagic and fibrinous —not purulent

493 —A tooth infection—caries of right upper bicuspids, abscess, osteitis, and purulent inflammation of right maxillary sinus, the only one involved

506 —Accessory median frontal sinus All of the sinuses were involved There was no meningitis or lobar pneumonia, but an acute fibrinopurulent "primary" pericarditis

A more detailed account of this work will be published later

I wish to express my thanks to Col W C Gorgas, U S A , Chief Sanitary Officer, for his kind permission to publish this communication

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AN ACCURATE AND RELIABLE THERMO-REGULATOR

A ROBIN, M D

WILMINGTON, DEL.

The multiplicity of thermoregulators on the market is a sufficient proof that none of them is thoroughly satisfactory A vexatious experience of several years with several instruments resulted in the adoption of the following device which proved entirely satisfactory

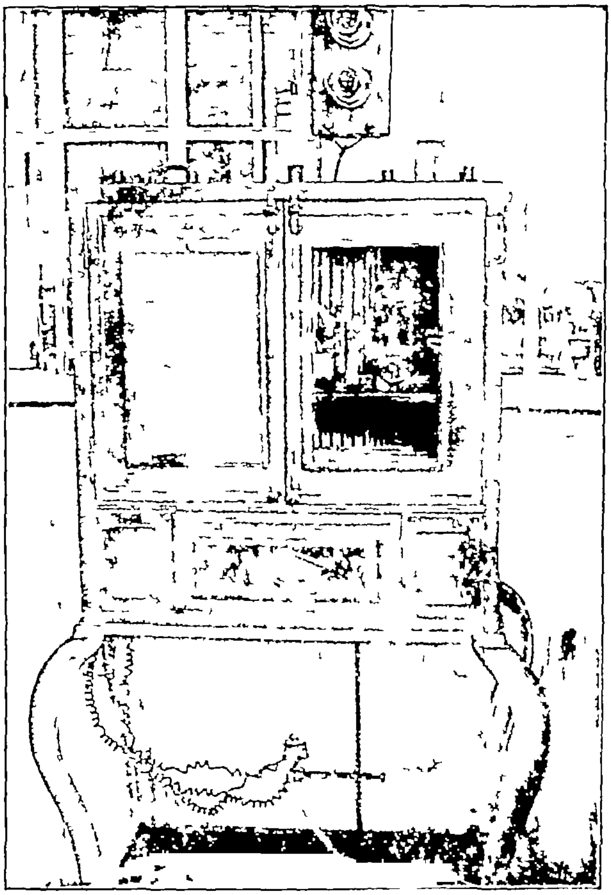
DESCRIPTION

This apparatus consists of an automatic burner, the same as is used in lighting residences, and thermostat

Automatic Burner —This consists of two electro magnets which control a small valve In ordinary usage the magnet opening the valve is brought in action by a push button which, at the same time, operates a spark coil As the gas issues it is lighted by the spark Another push button operates the magnet which closes the valve and extinguishes the light To obviate the necessity of a spark coil, I bent one of the springs which operates the valve so that when the latter is closed the gas is not shut off completely, and a small flame is left burning

Thermostat —For over two years I used a thermostat which consists of a metal frame carrying an expanding bar made up of a strip of hard rubber and one of brass firmly bound together One end of the bar is pivoted while the other has attached to it a brass wire with a flattened point The latter travels between two platinum contact points, establishing the circuit either on the dark or light side according to whether the bar expands when the temperature passes beyond a certain point or contracts when the temperature is lowered This form of thermostat is furnished by Bausch and Lomb with their electric thermoregulator for oil lamps The motive power is furnished either by batteries or, what is much more convenient, if electric light is available, is to reduce the street current by two lamps (one 16 and one 8 candle-power) and connect the thermostat to the reduced current, as shown in the illustration

While the arrangement described worked satisfactorily in so far as the burner is concerned, the thermostat did not. Now and then it would catch and fail to make the contact, or the contact points would become encrusted and fail to establish the circuit



Recently I obtained from the Electric Heat Regulating Co , Minneapolis, their thermostat which they use in connection with a heat regulating device and which consists of a round steel spring carrying a steel blade The fore end of the latter travels between two contact points, the contact being made on the light or dark side, according to the expansion or contraction of the spring The adjustment of this device is very satisfactory, and the working of the thermostat in connection with the burner has proved perfect *The temperature of the incubator* has been maintained between 37.5 and 38 C with a constancy which far exceeds any regulator I had before used

I am satisfied that in the method of regulating the temperature of an incubator described above I have an arrangement which for simplicity and accuracy will find favor with laboratory workers

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Brutality for Humanitarian Purposes The El Paso *Times* states that the students of the medical school at Guadalajara Mexico have been granted permission by the city council to give four bull fights in the local arena The proceeds are to be devoted to the purchase of some needed instruments for the city hospital and to the establi[illegible] lical lib[illegible] for the use of the students

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON OFFICIAL REMEDIES" THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W A. PUCKNER, SECRETARY

(*Continued from page 1489*)

NOVOCAINE

Novocaine, $C_6H_4\ NH_2(COO\ C_2H_4\ N(C_2H_5)_2\ HCl) = C_{13}H_{21}O_2N_2Cl$, is the monhydrochloride of para-aminobenzoyldiethylaminoethanol

Novocaine crystallizes from alcohol in fine, colorless needles which melt at 156° C (312 8 F) It is soluble in an equal weight of water, but requires 30 parts of alcohol From the aqueous solution which is neutral alkali hydroxides and carbonates precipitate the free base in the form of a colorless oil which soon congeals to a crystalline mass but solution of sodium bicarbonate is miscible with solutions of novocaine without producing either precipitation or turbidity The free base crystallizes from diluted alcohol with 2 molecules of water but from ether or ligroin in the form of anhydrous shining prisms which melt at 58 to 60° C. (136 4° to 140 F), while the hydrated base melts at 51° C. (123 8° F)

The aqueous solution of the salt may be heated to boiling without decomposition and remains perfectly clear when kept for days in loosely stoppered vials. It gives precipitates even in very dilute solutions with the usual alkaloidal reagents such as postassium mercuric iodide, picric acid potassium iodide, etc.

It is incompatible with alkalies and their carbonates and the alkaloidal reagents.

Actions and Uses—It is a local anesthetic similar to cocaine, but said to be far less toxic than any of the cocaine substitutes When injected subcutaneously it is said to exert a prompt and powerful anesthetic action, but the effect is not sustained This may be remedied by the simultaneous injection of suprarenal alkaloid Novocaine is not irritant.

It is recommended in all cases in which cocaine is indicated

Dosage—For infiltration anesthesia, solutions of 0 25 Gm (4 grains) novocaine in 100 or 50 Gm. (3 2 or 1 6 ounces) physiologic salt solution, with or without 5 or 10 drops of suprarenal alkaloid solution (1-1000), for instillations and injections, solutions of 0 1 Gm (15 4 grains) novocaine in 10 or 5 Gm (150 or 75 grains) salt solution, with or without 10 drops of suprarenal alkaloid solution (1 1000) In ophthalmology, 1 to 5 to 10 per cent solution and in rhino-laryngology 5 to 20 per cent solutions are recommended, with the addition of 6 to 8 drops of suprarenal alkaloid solution (1 1000) to each 10 Cc (160 minims) Internally, owing to its feeble toxicity, it may be given in doses up to 0 5 Gm (7½ grains) to adults

Manufactured by Farbwerke vorm Meister Lucius & Bruening Hoechst a. M (Victor Koechl & Co., New York)

ORTHOFORM-NEW

META-AMIDO-PARA-OXYBENZOATE OF METHYL

Orthoform - new $C_6H_3\ (COO\ CH_3)\ (NH_2)\ (OH)$, 1 3 4 $= C_8H_9O_3N$, is the methyl ester of meta-amido-para-oxybenzoic acid

It is prepared by the nitration of para-oxybenzoate of methyl and reduction of the nitro product obtained. It occurs in a fine white crystalline powder, neutral in reaction and melting at 141° to 143° C (285 8° to 289 4° F) odorless and tasteless. It is scarcely soluble in water but soluble in 5 or 6 parts of alcohol and in 50 parts of ether It is decomposed by boiling with water or by warming with alkalies or their carbonates into methyl alcohol and paroxybenzoic acid. When crystallized from chloroform it sometimes assumes the form of white crystals melting at 110 to 111° C. (230° to 231 8 F) returning on melting to the ordinary form

The filtrate obtained after shaking a small portion with water produces a fugitive color with ferric chloride and should not give a reaction with silver nitrate. A solution of 0 1 Gm in 2 Cc. of water by the aid of hydrochloric acid is colored yellowish red on addition of sodium nitrite and then deposits a yellow precipitate, deepening to red on exposure to the air

It is decomposed by heating with water it is incompatible with alkalies and their carbonates

Actions and Uses—Orthoform-new is a local anesthetic, resembling cocaine in its local action, but not penetrating the tissues on account of its insolubility It has practically no action on the unbroken skin and produces no irritation except slight corrosion about the place of application It is somewhat antiseptic and practically non-toxic in the usual doses

It is used internally to relieve the pain of gastric ulcer Since it acts only on ulcerated surfaces, the relief of pain has been assumed to be evidence of the existence of an open ulcer It has been applied locally as an analgesic to wounds of every description It has been used in dentistry, in nasal catarrh, hay fever, etc

Dosage—Internally, 0 5 to 1 Gm (8 to 15 grains) in emulsion, locally, in substance as a dusting powder or mixed with milk sugar for insufflation, dissolved in ether and mixed with oil for pencilings, or as salve with wool fat (lanolin), etc

Manufactured by Farbwerke vorm Meister, Lucius & Bruening Hoechst a. M. (Victor Koechl & Co New York) U S patents Nos 610 348 and 625,158

ORTHOFORM-NEW HYDROCHLORIDE

Orthoform-new hydrochloride $C_8H_9O_3N\ HCl$, is the hydrochloride of meta-amido-para-oxybenzoic methyl ester

It is a white crystalline powder having an indefinite melting point and an acid reaction It is soluble in 10 parts of water Its reactions are the same as those of orthoform new except that it gives a reaction for chlorides with silver nitrate and has an acid reaction 3 65 Gm dissolved in 50 Cc. of alcohol require not less than 17 8 Cc. nor more than 18 Cc. of normal solution of sodium hydroxide to produce a neutral liquid.

Its incompatibilities are the same as those of orthoform new

Actions and Uses—The actions, uses and dosage of this compound are similar to those of orthoform-new, which see

Manufactured by Farbwerke vorm Meister Lucius & Bruening Hoechst a M (Victor Koechl & Co New York)

OVOFERRIN

FERRI VITELLINUM SYNTHETICUM

Ovoferrin is a solution containing 5 per cent of an artificial proteid-product in which iron is present in the so-called "organic" or "masked" form (a form which does not give the iron-test directly) The solution also contains 10 per cent of alcohol and some aromatics

Ovoferrin is prepared by modifying serum albumin by electrolysis producing a proteid which is classed by the manufacturers as a vitellin and introducing ferric hydrate into this proteid by heating under pressure The vitellin constituent of this preparation should not be confounded with the well known vitellin of the yolk of eggs.

The solution has a reddish brown color little odor, and a flat, slightly aromatic and alcoholic taste

The solution does not give a blue color on the addition of potassium ferrocyanide solution a blue tint develops slowly if an equal volume of 5 per cent. hydrochloric acid is added to the mixture a deep blue color develops at once if this mixture is boiled (difference from egg yolk)

The solution is not precipitated by boiling but gives precipitates with the alkalies with which it is incompatible It is also precipitated on half saturation with ammonium sulphate It is not precipitated by acids.

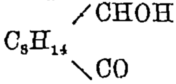
Actions and Uses—Ovoferrin is not appreciably affected by the gastric juice, a 0 5 per cent solution of hydrochloric acid liberating its iron very slowly and in-completely The product ranks with the other forms of artificially masked iron, which are devoid of the local action of the soluble inorganic iron salts, and, according to some authorities, are more readily absorbed and utilized

Dosage—8 to 16 Cc. (2 to 4 fluidrams) corresponding to from 0 03 to 0 06 Gm (½ to 1 grain) three times a day

Manufactured by Barnes & Hille Philadelphia U S. trademark.

OXAPHOR

Oxaphor is a 50 per cent solution of oxycamphor,



$$C_8H_{14}\begin{cases}CHOH\\CO\end{cases} = C_{10}H_{16}O_2$$

a derivative of camphor in which a hydrogen atom has been replaced by a hydroxyl group

Oxycamphor is prepared by reducing camphor quinone, $C_8H_{14}(CO)_2$ by means of zinc dust and acids extracting the oxycamphor from the liquid product of the reaction with an immiscible solvent and purifying it by distillation with steam

Oxycamphor is a white crystalline powder neutral in reaction melting at 203° to 205 C (397 4 to 401 F) It is soluble in about 50 parts of cold water more soluble in warm water, and readily soluble in all organic solvents except petroleum benzin in which it is less soluble, but from which it crystallizes in feathery aggregations. On prolonged keeping it is prone to undergo decomposition, but it keeps permanently in alcoholic solution It volatilizes gradually at ordinary temperature and readily with steam

Oxycamphor being decomposed on prolonged exposure to the air, is marketed only in the form of the 50 per cent. alcoholic solution under the name of 'oxaphor

Oxaphor should be completely soluble in alcohol and in benzene forming clear solutions Its filtered aqueous solution after acidulation with nitric acid should not afford a precipitate with silver nitrate or barium chloride. When incinerated it should yield no weighable residue

Actions and Uses,—Oxaphor is a depressant to the respiratory center, but is said to have no effect on circulation and secretion

It is recommended as a substitute for morphine in respiratory disorders, chiefly in cardiac dyspnea and asthma It is said to have been used with advantage in renal affections, in emphysema, bronchitis, etc Freedom from undesirable side-effects is claimed as an advantage over morphine

Dosage—2 to 3 Gm (30 to 45 grains) of oxaphor in a little water, wine, syrup or other desirable adjuvant

Manufactured by Farbwerke vorm Meister Lucius & Bruening Hoechst a M (Victor Koechl & Co, New York) U S patent No 610 301

PHENACETIN

A name applied to Acetphenetidinum, U S P

Manufactured by Farbenfabriken vorm. Friedr Bayer & Co., Elberfeld Germany (Continental Color & Chemical Co New York) U S patent No 400 086 (expired) U S trademark Nos 16 392 and 18 637

PHENOCOLL HYDROCHLORIDE

AMIDOACETPHENETIDIN HYDROCHLORIDE GLYCOCOLL-PARAPHENETIDIN HYDROCHLORIDE. PHENAMINE

Phenocoll hydrochloride, $C_6H_4\,OC_2H_5NH(CH_2NH_2.CO)HCl = C_{10}H_{14}O_2N_2\,HCl$, is the hydrochloride of a synthetic base produced by the combination of phenetidin (paraamidophenetol) and glycocoll (amidoacetic acid) Phenocoll, $C_6H_4\,OC_2H_5\,NH(CH_2CH_2.CO)$, differs from acetphenitidin (phenacetin), $C_6H_4\,OC_2H_5\,NH(CH_3\,CO)$, only in that one hydrogen atom in the acetyl group has been replaced by the NH_2 group

It is prepared by the action of chloracetylchloride on phenetidin treating the product of the reaction with ammonia, neutralizing the amidoacetphenetidin (phenocoll) so produced with hydrochloric acid and crystallization

It is a white microcrystalline powder soluble in 16 parts of water at the ordinary temperature more soluble in hot water from which it crystallizes in cubes while from hot alcoholic solution it crystallizes in needles. It is barely soluble in chloroform, ether or benzene (benzol) The free base (phenocoll) obtained by precipitating the aqueous solution with fixed alkalies or their carbonates forms white matted needles, containing one molecule of water In its hydrated condition it melts at 95° C. (203° F) while the anhydrous base melts at 100 5 C. (212 9 F) It is stable and not chemically affected by acids or alkalies unless subjected to prolonged boiling with these reagents by which phenocoll is split into phenetidin and glycocoll

It should produce a clear solution with 30 parts of water a turbidity indicating the presence of di or tri phenocoll and the solution should not produce a red color with ferric chloride showing absence of free phenetidin No ammonia should be evolved on the addition of sodium hydroxide to the warm solution and the precipitated base should be of a pure white color

Phenocoll hydrochloride is incompatible with soluble hydroxides or carbonates.

Actions and Uses—Phenocoll hydrochloride is similar to acetphenetidin (phenacetin) in its effects and acts as an antineuralgic and antipyretic It is claimed by some observers to be less depressing than other coal tar antipyretics and is said to be prompt in its antipyretic action It has been asserted to have an antiperiodic action and to be efficient as a substitute for quinine in malaria and free from unpleasant by-effects In somewhat larger doses than are usually employed it is said to have a beneficial action in rheumatic fever

Dosage—0 3 to 1 3 Gm (5 to 20 grains) in powder, dissolved in water before taking, hypodermically, in 0 25 to 0 5 Gm (4 to 8 grains) doses

Manufactured by Chemische Fabrik auf Actien vorm. E Schering. Berlin (Schering & Glatz New York) U S patent No 543,214

PHENOCOLL SALICYLATE

Phenocoll salicylate, $C_6H_4\,OC_2H_5\,NH(CH_2NH_2\,CO)\,C_6H_4\,OH\,COOH = C_{17}H_{20}O_5N_2$, is the salicylate of the synthetic base phenocoll (see phenocoll hydrochloride)

It is prepared by neutralizing a hot aqueous solution of salicylic acid with phenocoll (obtained as described under phenocoll hydrochloride) and cooling the solution

It forms fine white crystalline needles, having a sweetish taste sparingly soluble in cold water (1 200), readily soluble in hot water It gives a violet reaction with ferric chloride

It is incompatible with soluble *hydroxides and carbonates and* with bodies which are incompatible with the salicylates in general

Actions and Uses—It combines the therapeutic action of phenocoll (antipyretic, analgesic, see phenocoll hydrochloride) with those of salicylic acid (antiseptic, antirheumatic)

It is recommended in rheumatism, gout, chorea, pleuritis and fevers, especially in influenza

Dosage—1 to 2 Gm (15 to 30 grains)

ICHTHALBIN

A Correction—In The Journal, Oct 27, 1906 page 1378, under *Ichthalbin, the paragraph on "actions and* uses" belongs to Ichthoform The paragraph should read Its actions and uses are the same as those of ichthyol with the asserted advantage of freedom from such side effects as nausea, eructations etc It is recommended *for the same purposes as* ichthyol

(To be continued)

Use of Saponin in Mineral Water—The toxic character of saponin added to mineral water to increase the froth was the subject of debate at the recent meeting of the Association of German Mineral Water Manufacturers (*Pharmazeutische Zeitung* Sept 22, 1906) While this substance has been used for twenty five years without objection from a sanitary stand point, last year the police chemists suddenly announced that it is injurious to health and must no longer be added to drinks Later animal experiments indicated that its use is not injurious The association appropr [illegible] $210 for an investigation to determine the

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SATURDAY, NOVEMBER 10, 1906

THE EXPERIMENTAL PRODUCTION OF ATYPICAL EPITHELIAL PROLIFERATION IN RELATION TO CARCINOMA.

In view of the rather meager results so far obtained by the efforts to produce epithelial proliferation through external irritation, Bernhard Fischer[1] hit on the idea of trying to induce by experiment chronic inflammatory changes in the cutis without injury of a direct nature to the overlying epidermis. Perchance changes so induced in the cutis might lead in some way to epithelial proliferation, an idea that clearly is the outgrowth of the view held by Ribbert, in whose institute Fischer's work was done, of the great importance of the inflammatory infiltration about carcinomas in their genesis.

Accordingly, various substances were injected very carefully into the tissues of a rabbit's ear, but without any especially noteworthy results until olive oil mixed with the fat-staining dye called "Scharlach R" was used. As the oil fills the interstices of the tissue the epithelium of the ear is lifted away from the cartilage, in a few days mitoses appear and the epithelial layers increase in thickness, processes extend downward, epithelial pearls are formed, and eventually a picture is produced that morphologically recalls the structure of flat-celled carcinoma of the skin. Epithelial down growths may perforate the cartilage, and in one instance growth was noted in a large lymph vessel.

Inasmuch as these striking changes were produced only by olive oil with "Scharlach R" ("scarlet oil") it follows that the inflammatory changes caused by its injection in themselves can not be regarded as the cause of the epithelial proliferation. On the contrary, the proliferation must be traced to the special effect of the "scarlet oil" on the epithelial cells, and many details in the anatomic picture favor this view, and especially the fact that the direction and the extent of the epithelial growth follow very closely the distribution of the oil. Of course, other substances may have the same effect also. The important fact brought to light in these experiments is that "scarlet oil" appears to exercise a specific attraction or chemotaxis on cutaneous epithelial cells in the rabbit. Whether the same effect obtains generally in mammals, including man, remains to be seen.

While in no case did these experiments give rise to an actual carcinoma, the demonstration that substances which by special action cause epithelial proliferation are available for experimentation must prove of great value in the study of cancer, and it does not seem to be saying too much to predict that Fischer's work will have a decided and stimulating influence on the investigation of malignant tumors.

Fischer employs his results in constructing an ingenious hypothesis of the origin of malignant tumors. Starting with the existence of a "tumor matrix," be it of embryonal or postembryonal origin, composed of cells that naturally would differ somewhat from the other cells of the organ in their chemical activities, he assumes that unrestrained proliferation may be set in motion on the advent of some specific substance or *attraxin* which acts on the cells of the matrix only and not necessarily on other cells of the affected organ or body. The obvious necessity to assume a large number of specific chemotactic substances need not appear insurmountable in view of the great multiplicity of specific substances known already to exist in the serum, thanks to the investigations of immunologists during recent years. He points out that it is also conceivable that groups of cells which have been placed under unusual or abnormal conditions for some time may so change their chemical peculiarities that substances normally present in the body might exert special attraction on them. In this case one would expect the resulting tumors to be transplantable to other animals of the same species. In this case Fischer's theoretical consideration appears to coincide in a general way with Ehrlich's conclusions from his study of transplantable tumors in mice, viz., that the tumor cells acquire a special and increasing avidity for certain substances circulating in the blood. We hope that the ideas here briefly indicated may prove fruitful working hypotheses and that the experimental production of atypical epithelial hyperplasia actually opens a new route for attack on the problem of the cause of cancer.

THE NEW YORK WATER SUPPLY. AN OBJECT LESSON TO SANITARIANS

The need for expert supervision and control over municipal water supplies has perhaps never been more forcibly illustrated than in the series of documents published by the Merchants' Association of New York City. It has long been a source of wonder to European visitors that a matter so important to the public health, and so momentous to the welfare of a community as the public water supply, should be left to any degree in the hands of greedy contractors or irresponsible and perhaps treacherous public officials. The plight in which the city of New York finds itself furnishes a strong argument to those who are urging a larger measure of foresight and expert control in municipal affairs. It has been pointed out in the last few years by engineers of eminent authority that New York is in almost constant danger of a water famine In one of the recent reports of the Merchants' Association it is stated that "the existing storage is insufficient to carry the city over a protracted dry season unless the present rate of consumption be materially reduced In 1899 and 1900 the city was dependent for 255 days on its stored water At the present rate of consumption in case of continued drought the stored supply would be exhausted in 245 days Before a new supply is available it is estimated that the draft on the storage during the dry season will have so increased as to exhaust it in 175 days"

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[1] Münch. med. Wochenschr., 1906, vol. liii, p. 2042.

At present the city of New York has eighty-two distinct sources of water supply, but this is quite insufficient The work of procuring an additional quantity of water has already been entered on, but has met many grievous and unnecessary delays "by trifling with the work at Jerome Park reservoir, we have been tempting Providence for several years The city under a special act of the legislature agreed to pay the contractor $500,000 more than the contract price on the basis of an eight-hour day to finish the work by Sept 1, 1904 (full performance of which was due under the original contract on Nov 1, 1902), but the work is not yet done—in fact, only the westerly of the two reservoirs is completed, and that but recently" When completed, it is stated that the city's water system will have cost more than $280,000,000 As a whole, the finished New York system will be one of the largest public works ever undertaken by any community in ancient or modern times

There is one point brought out in the recent discussion of the New York situation to which attention should be directed It is shown that the imminent danger of water shortage is due in large part to a waste of water through thievery, defective plumbing and carelessness, which is clearly preventable The average daily consumption of water in New York, as in nearly all other large American cities, is at least three or four times as great as in European cities of the same class which are as cleanly kept and in which manufacturing industries dependent on abundant water supply are as numerous as in the American municipalities referred to When an engineering authority computes the needless waste in New York City at from 50 to 75 gallons a day for each inhabitant, an amount greater than the whole per capita consumption in most German cities, it is plain that the situation is serious This extravagant waste of water has a direct sanitary, as well as economic importance

The necessity for some sanitary supervision over a great public supply is too obvious to require argument The pollution of water on the various watersheds must be prevented, industrial nuisances abated local systems of sewerage maintained local filter plants established, and a rigorous sanitary patrol of the watersheds kept up unceasingly The larger the amount of water to be provided, the more extended must be the area to be supervised and the more imperious the necessity for constant vigilance In other words, a needless increase in the quantity of water to be supplied to a given community throws a heavy burden on those responsible for the sanitary quality of the supply and increases enormously the danger of a breakdown in sanitary efficiency Any measure, then, that tends to diminish that large fraction of the per capita water consumption in American cities which is pure waste deserves to receive the hearty support of all interested in municipal sanitation The sanitary quality of a large water supply can undoubtedly be improved by reducing the amount of waste and the efforts of the Merchants' Association of New York in this direction are worthy of general imitation

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THE ETIOLOGY OF CHOREA

Chorea, as one of the most frequent nervous diseases of childhood, must always command interest, and this is increased by the mystery regarding its relation to rheumatism and its rather obscure pathology While it is true that from time to time distinct brain lesions have been described, and while it is also true that certain writers have even regarded it as rheumatism of the brain, no such direct evidence as that of Poynton and Holmes[1] has hitherto been adduced It will be remembered that Poynton has been working on the bacteriology of rheumatic fever for some years, and may justly be regarded as an authority on this subject The view which he and his collaborator take of chorea is that it is in most cases rheumatic, and that it is directly due to an infection of the brain and meninges with the *Diplococcus rheumaticus*

The evidence on which this hypothesis is based (Poynton frankly states that it is a hypothesis) is, we think, rather striking It consists in the demonstration of the *Diplococcus rheumaticus* in the cerebral tissues of three cases of chorea, two of them ordinary rheumatic cases, the third a case of chorea gravidarum In the latter case there was no rheumatism, but there was an associated acute endocarditis from which the same organism was obtained In association with the micro-organisms were definite cerebral lesions, partly vascular, in the form of infiltration of the perivascular lymph spaces, thrombosis of vessels and areas of necrosis, and partly cellular, in the form of chromatolytic changes in the brain cells

The authors regard chorea, then, as due to the toxins of the diplococcus acting on the nerve cells an action which they compare to that produced by strychnin or tetanus toxin The fact that in chorea the symptoms are mainly motor while the degenerations are not confined to the motor areas they regard as so to speak accidental As they point out symptoms other than motor ones may be observed particularly the mental peculiarities of the disease which as is well kn[illegible] unt to actual insanity They think that the toxin is of a rheumatic nature not only on account of the bacterial findings, but also on account of the frequent association of the two diseases and the resemblances in their natural history such as their tendency to relapse, their mode of onset, and their association with secondary lesions common to both They are not as yet prepared to say that all cases of chorea are rheumatic The chorea of pregnancy is also generally rheumatic, statistics showing that in a large proportion of cases the patients give a history of previous attacks of articular rheumatism

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[1] Lancet Oct 13 1906 p [illegible]52 Nov 10 1906 p 1[illegible]

While these researches are in many ways convincing, they do not prove the rheumatic origin of chorea If it were admitted on all sides that rheumatism is due to the *Diplococcus rheumaticus* they might be considered to do so But this is far from being the case The results of cultures in acute articular rheumatism have been far from concordant In many cases cultures have been sterile These researches do seem to show that chorea is definitely associated with the presence of micro-organisms in the brain and meninges, and with definite anatomic lesions which are probably due to them, and this in itself is of great interest Before it is definitely decided that these organisms are the true causal agent the etiology of rheumatism must be cleared up and so far this has not been done to the satisfaction of even the majority of those who are competent to judge

A DANGER IN ORGANOTHERAPY

A very interesting development of our knowledge of the effect of the various preparations of the suprarenal gland has been the confirmation from a number of observers in different countries of the fact that the use of considerable quantities, in animals at least, produces arterial degeneration It is pointed out as a triumph of experimental pathology that at last we are in the position to be able to produce degeneration of arteries at will for purposes of study It is rather disquieting news, however, for those who have been prescribing the remedy in considerable doses for some time and still more for those who have advised its employment over prolonged periods for the treatment of nasal conditions The use of various preparations of the suprarenal gland in powder form for local applications in the nose has not been confined to physicians' hands, patients have been given powder blowers and have been counseled to use the substance rather freely at intervals of a few hours in order to have that freedom of nasal respiration, the absence of which in enlargement of the turbinates and in various conditions of hyperemia of the nasal mucous membrane is a source of so much discomfort

We are not sure how much of the powder or of certain extractives may be absorbed into the system as the result of this application Observation has shown, however that there is a certain increase of blood pressure from fifteen minutes to a half hour after the application and that occasionally also there is some increase in the rapidity of the heart action The latter effect is probably only secondary to the increase of blood pressure. It is easy to understand that such effects if frequently repeated over prolonged periods would almost surely lead to the development of precocious changes in the arteries if not in the heart Repeated doses would not produce the acute degenerations that are seen in animals from massive doses, but such use of the substance can scarcely be expected entirely to preclude the danger of gradually progressive changes in the direction of pathologic conditions In a word, not enough is yet known with regard to the physiologic action of suprarenal substance or its extracts to justify us in advising its employment as a routine remedy for any length of time

This is a typical example of the dangers that are involved in the application of the very limited knowledge we possess at the present time as to the ultimate action of most of the organo-therapeutic remedies We know that they are often extremely active substances, sometimes very helpful in their immediate effects Beyond this, however, our knowledge does not go It could easily happen that pathologic processes—the real source of which would remain latent until the coincidence of a number of cases occurring under similar conditions would arouse suspicion—might unwittingly be initiated by their use It would be sad, indeed, if our modern scientific medicine should have any such rude awakening from its dream of therapeutic progress as this would occasion It at least behooves us to be reasonably careful in the application of such remedies and especially not to hand over the employment of them too freely to the public under such circumstances that they will be used over prolonged periods without proper safeguards and the careful observation of a trained medical mind

NEWSPAPERS AND QUACKS

Condemnation of the charlatan by medical men is often viewed with suspicion by the layman and subjects the physician to the unjust charge of jealousy and self-seeking No such suspicion, however, can rest on the layman who shows up these fraudulent practitioners Copies of the *Cleveland News* come to our desk, telling of a very interesting investigation made by a reporter for the paper, Charles F Stuart, among "eminent specialists" of that city He declares "I have known some murderers, a few burglars, some pickpockets and a scattering assortment of other criminals, and until recently I held that the thief who robs the children's fresh-air-fund contribution box holds the record for combined cowardice and meanness in the art of theft Since then, however, I have visited that colony of graft called 'quackdom' Now I feel like taking off my hat to the fresh air fund sneak and telling him that he has not only an equal, but a superior" Being in perfect physical condition, Mr Stuart first secured a thorough examination by reputable physicians and obtained from them certificates that he was in a normal condition and in excellent health He then went to some of the quacks of Cleveland, who found him afflicted with heart trouble, nervous prostration, kidney disease, bladder trouble, liver complaint, stomach trouble, etc The reporter, writing in a lay publication, has to veil what he means by "etc" Almost every quack assured him that he was the victim of certain unmentionable diseases, evidently, he suggests, to secure a hold on him and to induce secrecy and thus to prevent exposure of their lies He secured medicines from many of these quacks and publishes their pictures and tells what they claim they could do for him, thus making a showing that certainly ought to be of inestimable value to the people of Cleveland, afflicted as that city is with these parasites In our miscellany department this week we quote further from these articles The *News* certainly is doing good work and its example might well be followed elsewhere

PHYSICIANS AND POPULARITY IN GERMANY

Some time ago when the niches in the Hall of Fame were to be filled, there was a certain amount of surprise, among the medical profession at least, that no physicians were included in the list of the chosen Many of us thought that Benjamin Rush, at least, ought to have had his niche In contrast to this, notice the result of the recent popular vote in Germany as to the twelve greatest men in the fatherland Third in the list stood the name of Robert Koch, and eleventh that of Ernst von Behring This does not indicate that American physicians have never accomplished anything, but, rather that the American people, taking them on an average, do not have the same knowledge of the general affairs of the world as the German This statement will perhaps bear modifying, for the Americans are great newspaper readers The fault probably lies with the newspaper editors, so many of whom are unable to distinguish real medical progress and achievement from the self-advertising announcements by quackish members of the regular profession, or even from the "remarkable discoveries" heralded in the advertising columns When we consider that the South, which benefited immeasurably by his discovery, only contributed a few hundred dollars toward the fund to perpetuate the name of Walter Reed, and that this was mostly contributed by physicians, we get some idea of popular knowledge of medical discoveries in this country Let us hope that this condition will not always continue

THE BLOOD CHANGES IN MUMPS

There are few affections with which mumps is likely to be confounded but at times especially at an early stage of the disease and when a definite diagnosis is at once required a ready means of recognition is much to be desired It has been shown that characteristic changes in the blood take place even during the first days of an attack of mumps, and this fact may be utilized practically as a means of diagnosis The number of leucocytes is, as a rule, increased, although the leucocytosis may not be marked There is a noteworthy increase in the number of lymphocytes and a somewhat proportionate diminution in the number of polymorphonuclear neutrophiles Observations yielding parallel results have been made by Dr Ira S Wile,[1] who has found the lymphocytosis, both relative and absolute, constant, appearing on the first day of the disease and persisting until the glandular swelling has subsided The degree of lymphocytosis appears to bear some relation to the severity of the attack, for it is more marked when the affection is bilateral than when only one side is involved The phenomenon is most marked at puberty, and it becomes progressively less pronounced with advancing years In this connection it should be borne in mind that the number of lymphocytes is normally high in early life, but after the age of one year it does not attain the figures observed in the presence of mumps In the same degree as the number of lymphocytes is increased in the course of this disease the number of polymorphonuclear neutrophiles is diminished In the presence of complications, however, such as orchitis, the number of polymorphonuclear neutrophiles undergoes an increase, although there may be no absolute leucocytosis The eosinophiles are slightly diminished at the beginning, but their number becomes normal or increased during convalescence The basophiles remain unchanged There is no secondary anemia Examination of the blood is especially valuable in the diagnosis of mumps from the condition with which it is most likely to be confounded, namely, cervical adenitis In the latter, however, the leucocytosis is generally quite marked, and the polymorphonuclear neutrophiles, and not the lymphocytes, are increased

A GOOD LEGISLATIVE RECORD IN MASSACHUSETTS

Regardless of party affiliation, the physicians of Massachusetts seem to be well pleased with the record of the recent state administration A committee of physicians prepared a circular of commendation and it has received the endorsement of hundreds of physicians from all over the state In it, attention is called to the achievements of the state administration in increasing and strengthening the statutory safeguards erected for the protection of health and physical well-being of the citizens of Massachusetts In our news department this week we quote from this circular the portion which itemizes the enactments referred to The circular particularly praises Governor Guild who has just been re-elected to another term, for the "enlightened and active interest" which he has exerted in the unusual number of important measures that have been placed on the statute books of Massachusetts this year and for his "breadth of knowledge and keenness of interest in the preservation of the public health in general and of the personal welfare of every citizen We congratulate Massachusetts on this excellent record in public health affairs and we are glad the profession has not been slow to express itself

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[1] Centrbl f Bakt 1906 vol

Medical News

ARKANSAS

Personal.—Dr Anderson Watkins, city physician and superintendent of the city hospital of Little Rock, will, it is reported, retire at the end of his present term and resume private practice ——Dr Ollie Oberholtzer, Little Rock, has decided to become a medical missionary and will sail for India about the first of December

Crusade Against Tuberculosis.—The Fort Smith Board of Health has inaugurated a crusade against the spread of consumption and has issued a circular to physicians, professional nurses, clergymen, teachers, the daily press and employers of men, detailing briefly the facts regarding tuberculosis and the best methods of its prevention

Hospital Notes—The judge of Sebastian County has authorized the purchase of 25 acres in the eastern portion of Fort Smith for a poor farm, on which a detention hospital will be erected ——The site for the Kansas City Southern Railway Hospital, Mena, has been selected and work will be commenced at an early date ——The contract has been let for building the hospital at Pine Bluff, to be conducted by the Ladies' Hospital Association The building will cost about $10,000, and its erection has been made possible by a bequest of the late Major W H. Davis, Althetmer, who donated the site and a considerable amount of the money required

CALIFORNIA.

Hospital News—The board of public works has notified the Los Angeles board of health that the new isolation hospital, erected at a cost of $56,000, is completed and ready for use ——A hospital is about to be erected for the Mammoth Company at Kennet.——Plans for a hospital for Santa Clara County, to cost $50,000, were adopted by the board of supervisors, October 2

Health Association Meeting—The California Public Health Association held its fall meeting at Alum Rock Springs, San José, October 12 The chief topic of discussion at the meeting was the mineral springs of California Dr Robert Crees, Paso Robles, read a paper on "The Use and Abuse of Mineral Springs," and Dr Philip Mills Jones, San Francisco, editor of the *California State Journal of Medicine*, described the different kinds of springs and their qualities In the general discussion which followed it was suggested that the city of San José place placards at each of the 18 different springs in Alum Rock Park telling of its individual qualities and how the waters would best be used

CONNECTICUT

Hospital Note—The funds for the erection of a new Catholic Hospital, Waterbury, now amount to $33,000 The site has been purchased, plans are practically completed, and the construction of the building will soon commence

War Against Diphtheria.—Dr Jos H Townsend, New Haven, secretary of the State Board of Health, in his monthly report for September, urges the adoption of energetic means of stamping out the spread of diphtheria, which he believes will be epidemic this winter

September Deaths.—The State Board of Health reports that during September 1,344 deaths occurred, 312 less than in August and 144 more than in September, 1905, and 155 more than the average number of deaths for the month during the five years preceding The death rate was equivalent to an annual rate of 16 0 per 1,000, and the deaths from infectious diseases were 205, or 15 per cent of the total mortality The chief death causes were Diarrheal diseases, 183, diseases of the nervous system, 133, heart diseases, 105, consumption, 89 accidents and violence, 76, pneumonia, 46, typhoid fever, 40, diphtheria, 31, and whooping cough, 24

DISTRICT OF COLUMBIA.

New Army Hospital.—The bids for the construction of the Walter Reed Army General Hospital varied from $195,025 to $232,715

Typhoid Fever—During the week ended October 27 there were 50 cases of typhoid fever reported to the health office and on that day there were 207 patients under treatment

Cocain Peddlers.—The health department and police of Washington are trying to break up the practice of selling cocain in that city Recently two cocain venders were arrested and convicted, the second one being fined $200 and sentenced to six months' imprisonment

Tuberculosis Hospital.—Congress has made an appropriation of $100,000 for a hospital for tuberculous patients A bill is now pending requiring the placarding of houses in which tuberculosis exists and requiring also that patients be taken to the tuberculosis hospital, and that houses in which tuberculous patients have resided be fumigated under the supervision of the health authorities

Death and Disease—The District health department reports 114 deaths during the week ended October 13, an increase of 17 over the preceding week and of 19 as compared with the corresponding week of 1905 Of the deaths, 7 were infants under one year of age The chief death causes were Consumption, 20, pneumonia, 9, cerebral hemorrhage, diarrhea, heart disease and kidney disease, each 8, typhoid fever, 7, and meningitis and brain disease, each 3 Diphtheria shows an increase and typhoid fever a decrease as compared with the preceding week

GEORGIA

Donation to College—Andrew Carnegie has given an additional $15,000 to the Atlanta College of Physicians and Surgeons to complete the building fund.

Hospital Notes—The new Griffin Hospital is now open for reception of patients ——The need of a hospital at Fitzgerald has caused Dr Dudley B Ware and other citizens to subscribe stock to buy land and equip a hospital building to contain 20 rooms

IDAHO

Typhoid—Typhoid is reported to be epidemic in Valley Twelve cases have developed and eight of the patients have been sent to the Laclede Hospital

Personal.—Dr John Boeck, Boise, was thrown from his carriage in a collision recently and fractured his right clavicle ——Dr Charles E Sears, Wallace, who was operated on October 17 for appendicitis, is reported to be improving

Hospital News—The Coeur d'Alêne Hospital Company has found it necessary to enlarge the accommodations of the institution and has commenced an addition to cost about $2 500, which will double its present capacity ——Plans have been completed for a hospital to be erected in Wallace, by Drs Mowerey and J E St Jaen, to cost about $7,000

Northern Idaho District Society—At the meeting of the Northern Idaho District Medical Society, October 4, held in Lewiston, a motion prevailed allowing the withdrawal of Kootenai and Shoshone counties, which are to be organized into a separate district New by laws in harmony with those of the state society were read, and the following officers were elected President, Dr Charles W Shaff, vice president Dr John F Hurlbut, and secretary treasurer, Dr Frank L. Hinkley, all of Lewiston

ILLINOIS

Epidemics—Smallpox is reported to be prevalent at Wyoming, and at Walnut, Bureau County, typhoid fever at Morris and diphtheria near Onarga, at Olney, Batestown, Hillery, and at Oakland At the latter place the public schools have been closed

Hydropathic Hospital—The superintendent of the Illinois Northern Hospital for the Insane, Elgin, has outlined plans for a hydropathic hospital in connection with that institution, which have received the approval of the governor The building is to have a capacity for about 20 patients

Conference of Charities Election.—At the recent meeting of the Illinois State Conference of Charities, Dr Frank P Norbury, Jacksonville, was elected president, Dr William H C Smith, Godfrey, a member of the committee on children, Dr Vaclav A Podstata, Elgin, chairman, and Drs Henry B Carriel and Josephine Milligan, Jacksonville, and Hugh T Patrick, Chicago, members of the committee on etiology of dependents, and Dr William A Nason, Algonquin, member of the committee on public care of poor

District Society Election.—At the annual meeting of the Sixth (Western) District Medical Society, held at Jacksonville, October 26, the following officers were elected Dr Thomas J Pitner, Jacksonville, president, Drs Robert J Christy, Quincy, and Harry R. Lemen, Alton, vice presidents, Dr William P Duncan, Jacksonville, secretary treasurer, and Drs John W Hairgrove, Jacksonville, Henry W Hand, White hall and Waldo Fisher, Alton, directors It was decided to hold the 1907 meeting in Quincy

Chicago

New Hospital Home—The People's Hospital is about to move into its new home at Twenty third Street and Archer Avenue, erected at a cost of $40,000 The hospital will continue to be under the charge of Dr J L Gary

Summer Hospital Closes—The Chicago *Tribune* Summer Hospital closed its second season October 15, after a service of 16 weeks to the convalescent poor of the city During this time the hospital cared for 372 patients, most of whom were children

Urologists Elect.—At the annual meeting of the Chicago Urological Association Dr Louis E Schmidt was elected president, Dr J Allen Paton, vice president, Dr Budd C Corbus, secretary, Dr William T Belfield, councilor, and Dr Henry G Anthony, alternate

IOWA.

Sues Medical Society—Alleging that the State Board of Medical Examiners has deprived him of his certificate to practice without giving him an opportunity to appear in his own defense, Anthony White, Taylor County, has instituted an action against the board in the district court The certificate is claimed to have been revoked without a hearing

Diphtheria.—On account of the prevalence of diphtheria in Pleasant Valley the public schools have been closed——On account of the possibility of an outbreak in the schools of Des Moines, the public health authorities have caused several of the school buildings to be fumigated. More than 20 cases are reported and every precaution is being taken to prevent its spread.

KANSAS

Diphtheria Closes Schools—Owing to the prevalence of diphtheria in Kingman, the city schools were closed October 18 for one week and church services, Sunday schools and entertainments were interdicted

Hospital News—The Sisters of Charity have secured a site on South Broadway, Leavenworth, for their new hospital——The Arkansas City Lodge of Elks has voted to furnish a room in the new Arkansas City Hospital and one in the South End Arkansas City Hospital

Personal.—Dr Elwood Armstrong, Greenleaf, has been confined to his house for three weeks with severe phlegmon of the hand, but is now improving——Dr Archibald McDonald, Fort Scott, is reported to be in a critical condition——Dr Peter Dockler, Onaga, celebrated his one hundred and first birthday, October 5

Communicable Diseases—Tuberculosis, typhoid fever and diphtheria are on the increase in the state, according to the report of the board of health for September, as compared with the same month of 1905 The increases are respectively 12 cases of consumption and 3 deaths, 24 cases of typhoid fever and 3 deaths, and 35 cases of diphtheria and 11 deaths Diphtheria was noted in 32 counties In Emporia 20 cases of diphtheria have been quarantined to date and two of the public schools have been closed In Lawrence the diphtheria situation is improving The high school and the seventh and eighth grades of the public schools have been reopened but the lower grades will remain closed for the time being The public schools of Kingman were opened October 25 after having been closed a week on account of diphtheria

KENTUCKY

Physicians' Buttons—The physicians in Louisville have been supplied with buttons, the wearing of which admits the bearer within the fire lines

Epidemic Diseases—Scarlet fever and diphtheria are reported to be epidemic in Elizabethtown Several deaths are said to have occurred and all the schools have been closed

New Dispensary—The Kentucky Anti Tuberculosis Association, at its meeting in Louisvile October 26, arranged to establish a dispensary equipped with a visiting nurse, under the supervision of the committee

Impersonated Physician.—A barber of Louisville was recently fined $10 and placed under bond of $300 for 90 days, on account of having impersonated a physician, made a physical examination of a patient and given a prescription.

Personal—Dr Henry A Shelby, Mayfield, has been appointed physician of Graves County——Dr John D Carpenter has been appointed assistant to the chair of clinical medicine, diseases of the chest and medical chemistry in the University of Louisville, Medical Department.

Ouchterlony's Will.—In the settlement of the estate of the late Dr John A Ouchterlony, provision was made, as has already been stated in The Journal, for a tuberculosis hospital which will probably be attached to St Elizabeth's Hospital and will be under the management of the Sisters of Charity of Nazareth The testator also bequeathed $1 000 to Dr Charles C Lucas and $1,000 to Dr Oscar W Doyle both of Louisville

Fight for Pure Milk.—The health officer of Louisville, Dr Maverell K. Allen, is enlisting the aid of commercial organizations in the fight which his department is making for the passage of the pure milk ordinance, which will prohibit feeding swill to cows, and will assist in giving Louisville a clean and healthful milk supply

Kentucky Valley Physicians Meet.—The annual meeting of the Kentucky Valley Medical Association was held at Campton, October 26 The following officers were elected Dr James H Stamper, Campton, president, Dr Cornelius Marcum, Miller's Creek, Estill County, vice president, and Dr Littlepage, Beattyville, secretary treasurer The next meeting of the association will be held in Torrent, in June, 1907

LOUISIANA.

Campaign Against Impure Milk.—In face of threats and lawsuit, the city health officer, Dr William P O'Reilly, is persisting in his campaign for pure food, with special reference to the milk supply of New Orleans, a great deal of which is said still to be under standard

Medical College Opens—The Tulane University of Louisiana, Medical Department, New Orleans, opened for its annual session, October 22 The only change in the medical faculty was the resignation of Dr Allan C Eustis, instructor in physics and assistant demonstrator of chemistry who is succeeded by Dr A H Lett, formerly of the University of Alabama

Quarantine Withdrawn—By proclamation of the governor, under date of October 17, on request of the State Board of Health, the proclamation of quarantine issued February 26, was revoked, annulled and withdrawn, except in so far as refers and applies to ports and places infected or suspected of being infected with the bubonic plague and Asiatic cholera, this proclamation to take effect November 1 The surgeon general of the United States Public Health and Marine Hospital Service concurred in the action of the board of health regarding quarantine with the exception of Ceiba, where suspicious cases are said still to exist

Hospital Reports.—During the first year the Woman's Dispensary, New Orleans, treated more than 1,000 patients The only requisite for treatment is that the patient is too poor to pay The medical staff is composed of Drs Sara Tew Mayo, Clara T Glenk, Susanna Otis, Elizabeth Bass, Cora M Bass, Clotilde C C Jauquet and Edith Loeber——The executive committee of the New Orleans Eye, Ear, Nose and Throat Hospital reports 542 admissions during September, 3,231 consultations, 80 operations and 46 emergency cases——At a meeting of the board of the Touro Medical Infirmary October 4, the superintendent reported that during September 94 patients were admitted 98 discharged and 5 died and that on October 1 there were 60 patients in the hospital The 2,802 free consultations at the outdoor clinic were distributed as follows Surgical, 3,033, gynecologic, 184, eye 1,090, ear nose and throat, 408, children, 92, internal medicine, 200, digestive diseases, 45, nervous and mental diseases, 26, skin diseases, 30, genitourinary diseases, 34 and dental, 44

MAINE

Quarantine Station—Plans have been approved for the new quarantine station at the north end of House Island, Portland, which will cost $25 000

Typhoid Fever—Because of the prevalence of typhoid fever in the towns north of Bangor especially in Oldtown where there are at least 15 cases, the Bangor physicians are advising special precautions to avoid an epidemic in that city

New Wing for State Hospital—The hospital trustees have recommended the construction of a new wing for the Eastern Maine Hospital, Bangor, to cost from $125 000 to $150 000 The trustees also recommended an appropriation of $2 500 to $3 000 to cover the needed improvements in the Summer Hospital for the Insane, Chase Island

Medical Club Organized—At a meeting of the physicians of Westbrook, the organization of the Medical Club of Westbrook was effected and the following officers were elected President, Dr Jacob L Horr secretary treasurer, Dr Louis L Hills, and committee on by laws Drs Albert H Burroughs George K. Woodman and Louis J Hills

Malpractice Suit.—We are informed that in the suit for malpractice by C T Ripley against Dr Henry D Worth East Corinth, for $5 000 for alleged malpractice in treating a fracture of the plaintiff's leg the jury decided in favor of the plaintiff October 13 and damages of $100 were assessed against the defendant The defendant claimed that the plaintiff had removed a plaster ca[illegible] on his own responsibility and before the pr[illegible]

MARYLAND

The Criminally Insane.—Dr Joseph C Clark, superintendent of the Springfield Hospital for the Insane, has called on the lunacy commission for coöperation in preventing the commitment of the criminally insane to the state insane hospitals The modern outdoor treatment allows the patient the utmost liberty and operates with good results, but if the insane with criminal propensities are added, it will be necessary to protect the patients against the criminally insane and also to protect the latter against themselves The system would thus be disorganized He quoted statistics to show that insanity was increasing The institution at Springfield has 730 patients, who are engaged in outdoor employment on the farm, and 225 were added during the past year, several of the criminal insane class

Honors for Dr Hurd—Dr Henry M. Hurd, superintendent of the Johns Hopkins Hospital, was given a dinner by his colleagues at the Merchants' Club, November 1 He sailed for Europe November 5 on a year's leave of absence, and will devote several months to medical research. A lifesize portrait, by Chase, was presented to the board of directors of the hospital by the medical staff Dr William H. Welch presided at the dinner and made the presentation speech, dwelling feelingly and affectionately on Dr Hurd's services to the hospital The picture was received by Judge Harlan on behalf of the board Dr Hurd made fitting reply Drs Ira Remsen and Daniel C Gilman also spoke The portrait will be hung in the library The menu contained a facsimile of it and its cover represented one of the *Johns Hopkins Hospital Reports*, of which Dr Hurd is editor There were 141 subscribers, from all parts of the country and even from abroad, to the dinner and picture The committee of arrangements included Drs J M T Finney, H M Thomas, W W Russell, Thomas S Cullen, R H Follis, T B Futcher, R I Cole and J M Slemons

MASSACHUSETTS

Can Not Explain Scarlet Fever Contagion.—Brookline has had a series of about 15 cases of scarlet fever, all occurring on the route of one milkman Most careful examination of the employés, however, failed to show the source of the infection

Personal.—Dr Charles P Sylvester of Boston has gone to Florida for a month's vacation——Dr Eugene A Darling has been elected president, and Dr John T H Nichols, treasurer, of the Cambridge Antituberculosis Association

Diphtheria—Diphtheria is reported to be epidemic in Worcester On October 22, 52 families were under quarantine The number of new cases for the week was 42, and since August 300 cases have been reported.

Wins Inspector's Post—Dr Alfred F Downing of Cambridge has been appointed physical inspector for the state civil service commission, winning from 25 competitors in the examination held Oct 17, 1906 Dr Downing practices in Watertown, is a graduate of Harvard, the Harvard Medical School and of the Boston City Hospital

Another Leper Found.—A man from Hyde Park, admitted to the Massachusetts General Hospital, Boston for treatment for a skin disease, was considered a suspicious case, was isolated at Gallups Island, Boston Harbor, and later when the disease was proved was sent to the State Hospital for Leprosy on Penikese Island Buzzards Bay

To Check Public Spitting—Beginning October 24, the police commissioner of Boston gave notice that he would strictly enforce the law against spitting on the sidewalks or floors of any city or town hall, any public library or museum, in any church or theater, in any lecture or music hall in any ferryboat or steamboat, in any railway car or station waiting room or sidewalk connected therewith The violation of this ordinance is punishable by a fine not to exceed $20

Valuable Medical Library—The medical books are being transferred from the Boston Public Library to the Medical Library on the Fenway A card catalogue has also been made A considerable number of medical journals, the property of the city have been for some time at the library The Cambridge Public Library has deposited its collection of medical books in the Medical Library and other libraries in Boston are understood to have made similar arrangements The title, under these circumstances is vested in the original owner, with the right of recall at any time

Cost of Leper Colony—For the five lepers kept at the Isolation Colony on Penikese Island Buzzards Bay for the first 14 months, the expense to the state was $49,043, the greater portion of which is to be considered as initial expense, including the purchase of the island, the building of cottages, etc. Dr J F Lewis, superintendent of the Board of Charities of the State Adult Poor, estimates that an annual appropriation of $5,000 will be adequate for further expenses He considers the first year of the experiment a success and claims that the plan is more economical than the old system of caring for lepers in scattered portions of the commonwealth

Aid to Consumptives.—The tuberculosis camp maintained on the top of Parker Hill, Roxbury, since May 23, closed October 31 The average attendance each day this year was 50, as against 31 in 1905 July, 53, August, 58, September, 54, October, 45 One hundred and seventy nine patients have been treated and have made a net gain of over 500 pounds One man gained 44 pounds Very few lost in weight At the close 58 were provided for in various ways the Good Samaritan Hospital, the Holy Ghost Hospital, and some to Rutland. Dr Joseph H Saunders has been the physician in charge The charity is part of the work of the Association for the Relief and Control of Tuberculosis

Personal.—Drs Julius S Clarke, Ernest S Jack and W M Townsend have been elected members of the board of Melrose Hospital——At the annual meeting of the trustees of the Massachusetts Charity Eye and Ear Infirmary, Boston, October 24, *Dr George B Shattuck* was elected president of the board of managers——At the annual meeting of the Neighborhood Medical Club, composed of physicians of South Boston, Roxbury, Dorchester and Brookline, October 18, the guest of honor was Dr John H. Sherman, South Boston, one of the oldest physicians of the state, who was presented with a silk umbrella——Dr Fred E. Jones, Quincy, has been nominated by the governor as medical examiner for Norfolk County——Dr Stephen A Mahady, Hinsdale, has gone to Baltimore, and after a course of five months' study will leave for Europe

Elections—The West Brookfield Medical Club held its annual meeting, October 17, as the guest of Dr Alexander McNeish, Leicester The following officers were elected President, Dr Emerson A. Ludden, North Brookfield, vice president, Dr Albert G Blodgett, Ware, secretary, Dr Charles A. Blake, West Brookfield, treasurer, Dr F W Coles and executive committee, Drs Maurice W Pearson, Ware, Olney W Phelps, Warren, and Frederick J Sanborn, Spencer——At the annual meeting of the alumni of the College of Physicians and Surgeons of Boston, October 26, the following officers were elected President, Dr Procter K Browne, East Milton, vice president, Dr Edward L D Turner, Boston, secretary and treasurer, A. B Drake, Boston, and executive committee, Drs Aaron H Thomasson, Mary P Putnam and Katherine A Fenelon

Typhoid Unusually Prevalent.—There are probably more than 1,000 cases of typhoid fever in the state Serious outbreaks are reported in Arlington, Boston, Brookline, Brockton, Cambridge, Chelsea, Douglas, Easton, Everett, Fall River, Haverhill, Hyde Park, Lawrence, Lowell, Lynn, Malden, Marlboro, Medford, Monson Natick, Needham, New Bedford, Newton, North Adams, Northampton, Oxford, Provincetown, Rockland, Salem, Somerville Springfield, Waltham and Westfield Thirty five new cases and 5 deaths are reported in Boston for the week ending November 3 We have mentioned the infected milk source in Lynn, Needham, Natick and Wellesley Another source has been found in Lynn e g the spring water which is largely distributed to the factories One supply coming from Moose Hill, Swampscott, has been analyzed by the State Board of Health and found unfit for drinking purposes and its sale is forbidden

Praise Governor and Legislature—For the first time on record the leading physicians of the state have signed a nonpartisan endorsement of the good work done by a governor and legislature along public health lines Editorial reference to this is made in this issue Some of the specific acts to be credited to this year's administration of state affairs are as follows

An act (Chapter 502) providing for medical inspection of all children in the public schools for the exclusion of those suffering from infectious diseases for annual or more frequent tests of sight and hearing to the end that those suffering from all physical or mental defects thereof shall be guarded from injury and shall receive the full benefit of the school work and secure the best educational results

An act (Chap 386) regulating the sale of 'patent medicines containing alcohol opium morphin heroin or chloral hydrate absolutely prohibiting the sale of those which contain cocain or its salts or alpha or beta eucain and forbidding the sale of these latter drugs except on the written prescription of a registered physician dentist or veterinary surgeon

An act (Chap 508) based on an inaugural recommendation establishing a school for feeble-minded children with a physician as superintendent and assistant physicians one of whom shall be a woman which school shall be under the supervision of the State Board of Insanity and shall receive maintain and educate indigent feeble-minded persons gratuitously and others on equitable terms.

An act (Chap 158) to prohibit the pollution of the Charles River within the boundaries of the metropolitan parks district by unpurified sewage and another (Chap 360) of the same purport concerning the Neponset River

An act (Chap 365), designed to lighten the possible burden of maintaining pest houses in each city and town by permitting any two or more adjoining cities or towns to establish and maintain such hospitals in common

An act (Chap 116) to prevent the misuse of milk cans and jars and to prohibit the shipment of cans containing offensive material to the producers of milk This act has already done much to keep from public sale milk polluted by bacterial contamination and thus to protect infant life to some extent from its chief cause of mortality cholera infantum

A resolve (Chap 59), providing for an investigation of what unwholesome changes if any occur in the flesh of undrawn poultry

A resolve (Chap 96) providing for an investigation of barber shops and regulating and supervising their business in the interest of the public health

MICHIGAN

Personal.—Dr George E Sanford, Saline, has gone to the Harper Hospital, Detroit, for treatment ——Dr and Mrs Raymond D Sleight, Battle Creek, have started for Europe.——Dr Charles G Jenkins, Lansing, has been elected a member of the local board of education ——Dr Robert W Alton, Portland, will spend the winter in New Mexico

State Board Meeting—At the quarterly meeting of the State Board of Health, held in Lansing October 12, the two questions pre eminently before the conference were the matters of enforcement of the law as regards undertakers and embalmers and reciprocity in licensure of embalmers The conference recommended the adoption of a plan that a person holding a license as embalmer in one state and desiring to practice embalming in another state, may procure a license from that other state by filing with the secretary of the board of health in the state where he desires to practice, a certified copy of the examination papers on which he received his license in his own state and by securing from the secretary of his own state board of health a certificate to the effect that he is of good standing in his own state

MINNESOTA.

Donations—In response to the annual call for donations from St Luke's Hospital, Duluth, about $3,000 in cash, in addition to generous supplies, was received

Personal.—Dr E F Murphy has been appointed first assistant city physician and Dr David B Hilger, second assistant city physician, of St. Paul ——Dr Franklin R. Wright, Minneapolis, returned from Europe, October 12

Hospital Notes—The new Immanuel Lutheran Hospital, Mankato, was dedicated October 31, with impressive ceremonies ——The new Asbury Hospital, Minneapolis, with a capacity for 90 patients, was formally opened October 5, and is now in full operation

Red River Valley Meeting—At the quarterly meeting of the Red River Valley Medical Society, held in Crookston, Dr Jacob S Kjelland, Crookston, was elected president, Dr J Calvin Cummings St Hilaire, vice president, and Dr Herbert H Hodgson, Crookston, secretary treasurer

Epidemics.—On account of an epidemic of diphtheria the public schools of Rochester have been closed, Sunday schools and public meetings discontinued, and the public library has been shut up until further notice ——There are now reported to be about 20 cases of diphtheria in Duluth, the largest number at any one time in the city for several years ——An epidemic of ringworm has broken out in the schools of Fergus Falls

Councilor District Meeting—A joint meeting of the various component societies of the first councilor district comprising the Park River Medical Society, Red River Valley Medical Society Western Central Medical Society and the Clay Becker Medical Society, was held in Moorhead, September 24 Mayor C A Nye delivered an address of welcome and read a paper on "Some Points in Medical Jurisprudence" A number of interesting papers were presented and the proceedings were closed by a banquet at which 50 physicians were present

MISSOURI.

Contagious Diseases.—Two houses, near Independence have been placed under quarantine on account of four cases of smallpox ——Diphtheria is reported to be epidemic in Oregon

Car Hits Ambulance—A St. Louis street car ran into a City Dispensary ambulance October 7 causing the horses to run away, injuring Dr F Tanke the ambulance physician and causing a collision with another ambulance in which the driver was hurt

Society Gives Banquet.—Jackson County Medical Society gave a banquet at the Coates House, Kansas City, October 18, in celebration of the twenty fifth anniversary of its organization Dr Edward H Thrailkill, the president acted as toastmaster, and toasts were responded to by twelve members of the society

NEW JERSEY

Hospital Receives $5,000—A woman brought to the Somerville Hospital after sustaining severe injuries in an automobile accident October 14, has presented the hospital with a check for $5,000

Medical Inspection in Atlantic City—The report submitted by Medical Inspector, Dr Edward Guion, emphasizes the importance and necessity for a regular examining corps of physicians and trained nurses in the public schools of the city Nearly 1,000 of the pupils examined were found not to have been vaccinated, and 425 were found to be suffering with various forms of eye disease

NEW YORK.

Poisoned by Candy—More than 50 children in West New Rochelle have been ill as the result of eating colored candy known as "jaw breakers," and one child has died In every case the symptoms were the same, and the health department and police are making investigations

Central New York Physicians Meet—The Medical Association of Central New York held its annual meeting in Syracuse, October 17, at which the following officers were elected President, Dr William B Jones Rochester vice presidents, Drs Carlton C Frederick, Buffalo, and Paschal M Dowd, Oswego, secretary, Dr Clarence A Greenleaf Canoga, and treasurer, Dr William M Brown, Rochester

Northern Association Meeting—The Medical Association of Northern New York held its annual meeting in Malone October 9 Dr E S McClellan, Saranac Lake the president, delivered the opening address The following officers were elected Dr William C Smith, Winthrop president, Dr Percival F Dalphin, Malone, vice president, Dr Alfred G Wilding Malone, secretary, and Dr George H Oliver, Malone, treasurer

Examination of School Children.—The report of Dr Joseph C Palmer, chief medical examiner of schools in Syracuse, shows that during the first week in October, 110 schools were examined and 8,928 children examined, 47 of whom were excluded, 2 on account of scarlet fever, 3 on account of contagious skin diseases, 15 on account of skin diseases, 18 on account of pediculosis, 2 on account of whooping cough and 3 on account of mumps

Rabies Prevalent—Babylon Long Island, has been considerably alarmed over the prevalence of rabies among the dogs in that section The board of health convened in special session and passed stringent resolutions requiring all dog owners to keep their dogs under close watch, unless this order is obeyed the dogs will be shot. In New York City also the unusually large number of cases continues, 30 cases having been treated within a month Cures have been effected in all cases that have been treated

Loeb Home Opened—After a year's preparation the Solomon and Betty Loeb Memorial Home for Convalescents a short distance from Tarrytown, has been formally opened The home consists of a central administration building a cottage for male and one for female adults, and a children's building The institution is non sectarian and payment is asked of no one in straitened circumstances A city office has been opened where applications will be received and physicians hospitals and philanthropic societies are requested to send desirable patients

Hospital News.—Dr Eugene H Carpenter Oneida is about to erect a three story hospital building in that city ——A free dispensary for Troy has been incorporated for the aid of the poor of the city who are in need of free medical treatment Drs Charles F Kirlin and John H Reid are the attending surgeons Drs Edward L Lyons and Charles F Archambeault attending physicians Dr Thomas F Judge diseases of skin and clinician Drs Burton S Booth and Frank M Sul[illegible] diseases of the eye ear nose and throat and Dr Frank T Stannard genitourinary diseases ——Dr James H Glass Utica gave a reception, October 5 in honor of [illegible] physicians connected with the Faxton [illegible] farm ——The new Ellis Hospital S[illegible] inspection October 12 The pa[illegible] the old building October 15

New York City

Typhoid on Ward's Island.—There has been a slight epidemic of typhoid fever in the Manhattan State Hospital for the Insane, on Ward's Island. The disease is now decreasing, as there are at present only 24 patients in the hospital.

Lectures on Consumption.—The board of education will give free public lectures on tuberculosis to adults in coöperation with the committee on the prevention of tuberculosis of the Charity Organization Society. Drs. Addison W. Baird, John B. Huber and S. Adolphus Knopf will be the lecturers.

Lectures on Diseases of the Skin.—It has been announced that Dr. L. Duncan Bulkley will give an eighth series of lectures on diseases of the skin at the New York Skin and Cancer Hospital on Wednesday afternoons, commencing November 7, which will be free to the medical profession.

City Tuberculosis Hospital.—The $225,000 which the board of health asked from the city for the purpose of building a hospital for the care of incipient tuberculosis at Otisville, N. Y., has been appropriated. The shacks for the patients will cost $80,000, the dining room and kitchen, $20,000, a barn for 40 cows, $18,000, and a power plant, $30,000.

Physicians Not to be Summoned to the Dead.—An order has been issued by the commissioner of police that when a dead body is found policemen will not send for an ambulance to have the body pronounced dead, but will immediately notify the coroner. Hitherto, according to the regulations, no man was ever considered dead until so pronounced by a surgeon.

Infirmary Election.—The seventeenth annual meeting of the Long Island Throat Hospital and Eye Infirmary, Brooklyn, was held October 2. During the year 2,296 cases were treated, 1,083 prescriptions were given and 387 operations performed. The following officers were elected: Dr. Charles T. Schondelmeier, president, and Drs. Rashid S. Baddour and D. Morris Woolley, trustees.

Milk Boycott on Staten Island.—Unless the board of health of the Northfield section of Staten Island extends the time allowed for the renovation of certain dairies, a great number of independent dealers in Staten Island will be forced out of business. The cost of rebuilding dairies in compliance with the law would be so great that the dealers are considering the advisability of going out of business.

Contagious Diseases.—There were reported to the sanitary bureau for the week ending October 27, 336 cases of tuberculosis, with 159 deaths, 238 cases of diphtheria, with 25 deaths, 127 cases of typhoid fever, with 27 deaths, 90 cases of scarlet fever, with 3 deaths, 51 cases of measles, 38 cases of whooping cough, with 6 deaths, 11 cases of cerebrospinal meningitis with 5 deaths, and 42 cases of varicella, making a total of 933 cases, with 225 deaths.

The Spread of Trachoma.—The menacing spread of this affection among the school children of Manhattan and Brooklyn continues and, according to the board of health, there is pressing need in New York City for at least two more hospitals where this disease can be treated. It is estimated that in some parts of the city as many as 75 per cent. of the school children are affected by trachoma, while in Brooklyn about 25 per cent. were affected, and there is need of at least one more hospital in that borough.

NORTH CAROLINA

New Building Opened.—The new chemical building of the University of North Carolina, Chapel Hill, adds greatly to the facilities of the medical school. In the new building will be located the laboratories of pathology, bacteriology and physiology.

To Check Liquor Frauds.—The Cumberland County Medical Society, at a recent meeting, decided unanimously to petition the legislature to repeal section 4 of the prohibition law for Cumberland County, which permits the sale of whisky in drug stores on physicians' prescriptions. This extreme position appears to be the outcome of the disposition of "prohibition drinkers" who are willing to make free use of the kindly weakness of local practitioners to procure their daily drink.

OREGON

Want Medical Library.—A committee was appointed by the Lane County Medical Society to negotiate for the establishment of a medical department at the public library, Eugene.

Leprosy Diagnosed.—Drs. Ralph C. and Ray W. Matson have decided that the diseased Chinaman who was taken from his home on Chapman Street, Portland, to the county poor farm, is afflicted with leprosy.

PENNSYLVANIA.

Typhoid in Pittsburg.—The report of the bureau of health shows that during the month of October 634 cases of typhoid fever, with 34 deaths, were reported in Pittsburg.

For Criminal Insane.—The commission has selected the site for the State Hospital for the Criminal Insane, at Far View, in Wayne County. The state has made an appropriation of $150,000 for this purpose.

Sold Unlabeled Poison.—R. H. M. McKenzie, a druggist of Pittsburg, and Frank Fleckenstein, his clerk, who were tried recently on the charge of selling bichlorid of mercury tablets without labeling the box containing the poison, were found guilty, and McKenzie is also reported to have been found guilty of selling the tablets for an illegal purpose.

Impure Milk on Pullman Cars.—Under the direction of Dr. B. H. Warren, dairy and food commissioner, the examination is made of food served in dining cars on all railroads leaving Pittsburg. As a result of this investigation 32 charges are to be brought against the Pullman Parlor Car Company. In each of these cases the specific charge wil be the use of formaldehyd in the milk and cream served in the dining service.

Typhoid Fever.—The health authorities report 25 cases of typhoid fever in the state, and state that the outbreak has been traced to an infected milk supply.——The Pittsburg board of health reports that the 30 cases of typhoid fever, which were reported during September in the Twenty-first ward, were due to infected water from one spring.——Cambridge Springs reports 10 cases of typhoid fever.——Pittsburg officials say that the increase in daily reports of typhoid fever, which amounted on October 12 to 35 cases, is due to neglect of the hospitals to promptly report the cases. Up to October 18, 325 cases had been reported in Pittsburg.——Typhoid fever has made its appearance in Summit Hill, where 7 cases are reported.——Two patients at the State Hospital for the Insane, Norristown, are reported to be ill with typhoid fever.

Philadelphia

Addition to Hospital.—The contract has been let for the construction of a six-story addition to the Medico-Chirurgical Hospital, Eighteenth and Cherry Streets, to cost $80,000.

Hospital Bed for Teachers.—The public school teachers of Philadelphia have contributed $5,000 to endow a private room in Jefferson Hospital, to be known as the Lewis Elkin Memorial Room, which is to be at the free disposal of teachers needing medical or surgical treatment.

Results from Antitoxin.—The records of the Municipal Hospital show that not a fatal case of diphtheria has occurred where diphtheria antitoxin was injected during the first day of the disease. In cases where the injections were performed during the second day the average death rate was 4 to 5 per cent. Injections given on the third day had a death rate of from 13 to 17 per cent.

Personal.—Dr. David B. Birney, who was thrown from his carriage on October 13, was operated on October 22 for injuries sustained therefrom.——Dr. and Mrs. Alexander W. Biddle have returned from Japan.——Dr. Edward B. Meigs will spend the winter at Jena, Germany.——Dr. Robert Laigner of Paris is a guest of Dr. John L. Borsch. Dr. Laigner was for several years chief of Prof. De Wecker's clinic in Paris.——Dr. and Mrs. Frank H. Getchell have returned from Europe.

Mayor Plans New Hospital.—Mayor Weaver has planned to purchase ground for the erection of a hospital for the city's indigent insane patients, and an ordinance will be presented to the finance committee appropriating $261,000 for the purchase of 870 acres of ground in Byberry, in the Thirty-fifth Ward. The purchase of this property is recommended by the mayor, director of the health department, Dr. W. M. Late Coplin, and Drs. Charles K. Mills and F. X. Dercum. In his message the mayor states that in the Blockley insane department at the present time there are over 1,900 insane patients. The money for the construction of the institution is to come out of the proposed permanent loan of $13,500,000. It is the purpose of the authorities to erect buildings here and have at the same time ample ground for the inmates to till the soil, to be employed in other manual occupations, and thus bring in revenue which will help in their maintenance.

WEST VIRGINIA

Hospital Completed.—The new hospital at Charleston has been completed and equipped. It has accommodations for 20 patients and is under the charge of Dr. Frederick S. Thomas.

Leper Not Cremated.—It is reported that Raschid, the Assyrian leper, was not cremated at Elkins. Lime was deposited in and around the grave, and the shanty he occupied was burned down.

Society Passes Resolutions.—At the meeting of the County Medical Society of Barbour, Randolph and Tucker counties, held in Philippi, October 3, the following resolutions were adopted

Whereas The growth and development of the organized profession in the past five years has made possible certain lines of activity heretofore out of the question and

Whereas, The work undertaken by the various county and state associations, as well as by the American Medical Association, is in the interest of the public health and well being and

Whereas Certain journals owned by private interests and conducted for personal profit have seen fit to attack and criticise the official journals of the organized profession for the work which was being carried on therefore be it

Resolved, That we the members of the County Medical Society of Barbour Randolph and Tucker Counties do hereby express our approval and commendation of the position taken by The Journal of the American Medical Association regarding the advertising and sale of nostrums and be it further

Resolved That we hereby express our unqualified approval of the work of the American Medical Association, of the Board of Trustees and the officers of the Association and our confidence in them and that we especially approve of and endorse the business foresight shown by the Board of Trustees in accumulating a surplus for financial emergencies and future expansion and be it further

Resolved That we hereby express our approval of the work of the Council on Pharmacy and Chemistry and urge that it continue its investigation into proprietary and secret preparations in order that the profession may be enlightened and the public benefited by the results of their labor, and be it further

Resolved That we express the hope that the time will soon come when the American Medical Association will be in position to publish a large part of the medical books used by physicians and be it further

Resolved That we hereby express our unqualified disapproval and condemnation of the action of certain medical colleges in advertising for students in other than medical journals and be it further

Resolved That we hereby express our disapproval of the action of certal manufacturing pharmacists who have placed the facili of certain manufacturing pharmacists who have placed the facilities of their plants at the disposal of quacks and vendors of nostrums and be it further

Resolved That a copy of these resolutions be sent to the *Journal of the West Virginia State Medical Association* and to The Journal of the American Medical Association

WISCONSIN

Pre-Medical Course—Beginning with the present year, students of the pre medical course of the Wisconsin State University Madison, will take their first two years of work in the university This has been made possible by the establishment of a department of physiology of which Dr Joseph Erlanger, formerly of Johns Hopkins School Baltimore, is to be the head A new course in physiologic chemistry has also been added under the charge of Prof D C Bradley of Yale Medical School, and it is planned in the near future to establish departments of pharmacology and pathology The department of anatomy is thoroughly equipped and under the charge of Professor Bardeen

Hospital Items—The contract has been let for the construction of the new Lutheran Hospital Eau Claire——Work on the new Montgomery Hospital is progressing The structure will be four stories in height and modeled after the Augustana Hospital, Chicago——The Scandinavian American Hospital Company, Stoughton has been dissolved it is reported and a site has ben purchased in Chippewa Falls for a new hospital, with accommodations for 40 patients which will be ready for occupancy January 1——Dr and Mrs Frederick Layton, Milwaukee, have donated to the Milwaukee Hospital a home for those suffering from chronic diseases, to be erected at an expense of about $30 000

GENERAL

New Electrotherapeutic Officers.—At the recent sixteenth annual meeting of the American Electrotherapeutic Association at Philadelphia, the following officers were elected President, Dr Morris Weil Brinkmann New York, vice presidents Drs J D Gibson, Denver, and M K Kassabian, Philadelphia secretary, Dr A C Geyser, New York treasurer Dr Richard Joseph Nunn Savannah Ga, executive council, Drs William Benham Snow, Fred H Morse and Francis B Bishop

Yellow Fever in Cuba.—Dr von Ezdorf of the United States Public Health and Marine Hospital Service reports that 7 new cases and one death from yellow fever occurred in Havana during the week ending October 16 The sanitary forces in Havana are to be increased It is proposed to have 50 inspectors for oiling and under each inspector 4 men to do oiling of breeding places for mosquitoes Fumigation of houses is now being more generally done with sulphur Since the case and death from yellow fever which occurred at Cruces on Sept 18, 1906, 3 other cases have have been reported from there as follows One on October 8, patient died October 10, 1, October 13, found at Cienfuegos, 1, October 13, confirmed at Cruces The chief quarantine officer for the island of Cuba directed a circular letter to all quarantine officers on the island, in which he recommends that an inspection of all vessels in the harbor be made daily, that in case a non immune be found to have a fever such case be isolated and measure taken to destroy mosquitoes aboard the vessel Three new cases of yellow fever (confirmed) occurred in Havana October 19

CANADA.

Typhoid Fever in Ontario—Twenty five cases of typhoid fever are reported in New Toronto, a suburb of Toronto The Ontario board of health has been called to deal with an epidemic of typhoid fever at Sudbury The situation at the Canadian Soo is also said to be serious

Typhoid and Tuberculosis at Saskatchewan—Dr Moore, secretary of the Canadian Association for the Prevention of Tuberculosis, has held a number of meetings in Saskatchewan in the interests of that association The department of agriculture, which handles the health matters of the province, has assisted Dr Moore and at many of the meetings their health officer, Dr Seymour, has also delivered addresses on both typhoid fever and tuberculosis The department has issued a small folder on the two subjects for general distribution

The Deportation of Insane—The dominion immigration act provides the authority for provinces deporting insane who have lived therein for less than two years Ontario, under the supervision of its inspector of asylums, is carrying out this work in a systematic way It is estimated that the province saves about $2,000 on each insane person deported, as in Ontario the cost per annum of maintaining a patient is $135 and the average life of one in the asylum 13 years A transportation company must bear the expense of deporting those whom it brought in

Hospital News—A new sanatorium for consumptives to cost $27,000 is to be added to the establishments of the National Sanitarium Association at Weston, near Toronto Two prominent citizens of Toronto have each contributed $10 000 of this amont for cottages——The sixteenth annual meeting of the Foundling Hospital, Montreal, was held during the week ending October 20 Dr Evans was re elected secretary of the medical board——The total number of patients treated in the Winnipeg General Hospital during the week ending October 20 was 365, 213 being men, 117 women and 25 children

Personal.—Dr R. E McKechnie has returned home to Vancouver after spending two months in hospitals of eastern Canada and the United States——Drs J F W Ross and Adam H Wright, Toronto, have returned from attendance on the American Association of Obstetricians and Gynecologists, and from fraternal visits to Drs L S McMurtry and Horace Grant of Louisville, Ky——Dr H P H Galloway, formerly of Toronto but latterly of Winnipeg has been appointed lecturer in orthopedic surgery in Manitoba Medical College——Dr W W Boyce, Bellevile Ont, has been appointed physician to the Institute for the Blind at Belleville——Prof J George Adami McGill University, Montreal, advocates the daily compulsory inspection of school children in that city, in order to detect incipient tuberculosis——Dr C B Coughlin Peterboro, Ont, a newly appointed member of the Ontario board of health has been appointed principal of the Institute for the Blind at Belleville, Ont

FOREIGN

Late Research on Syphilis.—Many of the men who have thrown new light on syphilis during the last twelvemonth gathered at Berne in September for the Ninth German Congress of Dermatology, and reported the results of their latest researches Hoffmann whose name was associated with Schaudinn's in the discovery of the *Spirochaeta pallida* proclaimed that there can be no question as to the etiologic importance of this spirochete in syphilis as it has been found by innumerable observers in syphilitic lesions and nowhere except in syphilis Its delicacy and numerous twists distinguish it from other spirochetes, but the refringens has flagella as well as the pallida He advocates systematic examination for the pallida as much as for the gonococcus Neisser reported that only the primary sore and glandular involvement were observed on the lower monkeys inoculated with syphilis, while the higher ones developed the exanthem Inoculations were positive with substance from the sclerosis and papule sometimes also with blood but never with sperm and milk Inoculations from the spleen marrow, gl [illegible] ulted [illegible]

The practical results of his extensive research are, to date, merely the use of serum in diagnosis in the clinic The findings have been positive in 77 per cent of 213 patients Excision of the primary sore was successful in preventing infection in some instances, as late as after eight hours, but in others it failed, even when done within 10 minutes of the infection He has found that rabbits are also susceptible to syphilis In regard to preventive treatment, Metchnikoff affirmed anew his belief that inunction with a 30 per cent calomel salve would prevent infection, citing the successful prophylaxis by this means of the medical student Maisonneuve and of Pirquet's patient Neisser stated that occasionally infection was prevented after inoculation of monkeys by treating with 2 per 1,000 bichlorid or concentrated carbolic acid solution, but failure was the rule General skepticism prevailed on this subject Metchnikoff reported also that 20 passages of syphilitic virus through the rhesus rendered it harmless for the chimpanzee Finger's communication on the subject of the susceptibility of syphilitics to renewed infection confirmed the lack of infection when the virus was merely inoculated on the incised skin The results, however, were strikingly different when the virus was implanted in a pocket in the skin The inoculations resulted positively in 89 per cent of the cases of primary syphilis, in 60 per cent of existing secondary syphilis, and in 85 per cent of the cases of existing tertiary syphilis

German Ophthalmologic Congress.—The twenty third congress was held at Heidelberg in August, and the Graefe medal was awarded to Ewald Hering of Leipsic, the physiologist, for his researches on the physiology of vision and color and light perception The Graefe medal was awarded first to von Helmholtz and then to T Leber, Hering being the third recipient and, like the others, not an ophthalmologist The relations between trauma and parenchymatous keratitis were discussed from opposite points of view, the subject being left undecided Holth of Christiania called attention to the fine results sometimes attained in treatment of glaucoma when the supposed mishap of a fistula in the iris followed He suggests the systematic making of a fistula into the iris in treatment of glaucoma, and has tried it in the clinic, with highly satisfactory results Several speakers warned against trusting too blindly to Schirmer's intensive mercurial treatment of infected injuries of the eyes It has saved many otherwise doomed eyes but is not a certain preventive of sympathetic ophthalmia, and too conservative measures may result disastrously It was reported that experimental research on the application of Bier's artificial hyperemia in treatment of eye affections did not give very encouraging results Onodi of Budapest discussed the close anatomic connection between the nose and the eye, showing that a nasal affection with involvement of the sinuses could easily spread to the eye, and even a contralateral affection of the optic nerve is possible with a unilateral rhinologic affection

Malaria Prophylaxis in Ceylon.—Ceylon's 4,000 000 inhabitants, according to the *Lancet*, maintain a fair standard of health, to which happy condition a climate almost unsurpassed for variety does much to contribute Malarial fever is one of the scourges of the island, and last year the Northwestern and Sabaragamuwa provinces suffered in this respect more than usual. The experiment of administering quinin regularly as a prophylactic, already tried with some success on the prisoners in Mahara and Mutwal jails, was extended to an area in the Northwestern province Of 232 villagers who were treated with quinin 36 (or 15 5 per cent) suffered from malaria, while of 210 boutique keepers and 24 villagers who were not treated with quinin 140 (or 66 per cent) of the former and 12 (or 50 per cent) of the latter suffered from malaria The number of people in the village was 466 Commenting on the matter in an introductory note to the report on Ceylon, issued by the colonial office, the governor, Sir Henry A Blake, states that he has arranged with the principal civil medical officer to extend this experiment to all malarial districts during the present year by grouping the villages and sending to each group an itinerant dispenser, who will administer quinin at regular intervals during the malarial season, while all schools will be similarly treated. The result of the experiment can not fail to be interesting, he declares, and he hopes that it will be satisfactory

International Medical Association of Mexico—The second annual meeting of this association is to be held in the City of Mexico, November 14 to 17 Eight sections have been arranged including one for life insurance and one for obstetrics The program is printed both in Spanish and English, and the addresses are in either language R D Robinson of Torreon, Coahuila, is president of the organization, and W R. Jamieson of the same place is secretary and treasurer Communications are announced on "Conservatism in Surgery," by R H L Bibb of Saltillo, "Treatment of Gas Burns," by Hill Rowe of Las Esperanzas, "Burns," by H Payne of Sabinas, "Rubber in the Fenestrating of Compound Fractures," by H Crouse, El Paso, "Pneumonia," by S H. Hodgson of Bridgeport, Ala , "Ichthyol in Erysipelas," W C Fallebert, Celaya, "Eyestrain," and "Principles of Feeding in Enteric Fevers," by the president, "Technic of Urethral Dilatation," F C Valentine, New York, and "A Few of Nature's Cures," by C E Husk, Santa Barbara, Ch

Boas' Retirement.—The *Deutsche med Wochschr* states that I Boas has handed over his private polyclinic to his assistants, Elsner and Ury, and now retires from further connection with it, giving up his classes To commemorate his 20 years of work in the polyclinic, since he founded it in 1886, he has collected the 126 articles and monographs written by himself and his assistants and pupils, and has published them in two volumes, entitled "Gesammelte Beiträge aus dem Gebiete der Physiologie, Pathologie und Therapie der Verdauung" In the course of these 20 years he has published four manuals on the diseases of the stomach and intestine, and he has trained about a thousand pupils His work has been done exclusively on private initiative, without aid or support from any official institutions Our exchange adds that this record should certainly give Boas more satisfaction than the empty title of professor which the authorities have always denied him

Tenth Annual Medical Congress of Roumania.—This congress was held at Bucharest recently with about 200 physicians in attendance. It was organized by the national medical association of the country, and the public authorities were well represented Leonte, the president of the congress, referred to the 32 new hospitals recently erected by the king in the rural districts, and to the modification of the pension law extending its privileges to medical men occupying official government positions The scientific work being done by some of the Roumanian physicians, especially Marinesco and others at Bucharest, is of the highest order

Will Blacklist Authors of Write-ups—The blacklist which the German Medical Press Association proposes to get up is to contain the names of authors who contribute "write ups" for pay and of those who publish an article, even though its style is changed slightly for the occasion, in more than one journal without the knowledge of the publishers The association asks that such articles be not referred to in any way by the medical press

Additions to a Glasgow Infirmary—The Western Infirmary, Glasgow, appeals for funds for a further extension in addition to the new wing which was recently opened and which accommodates 70 patients There are reported to be over 500 patients waiting admission

French Investigator in Java, Siam and Burma.—Dr de Beurmann, in charge of a service at the Saint Louis Hospital, Paris, has been commissioned by the French government to proceed to the Orient to study syphilis and leprosy

LONDON LETTER.

(*From Our Regular Correspondent*)

London, Oct 20, 1906

Mr Jonathan Hutchinson and the Outbreak of Leprosy in Switzerland.

Mr Jonathan Hutchinson's indefatigable industry in endeavoring to convince people of the truth of his well known fish hypothesis of the causation of leprosy is once more in evidence To his recent journeys of investigation in Africa and India he has now added a short visit to the Rhone Valley to investigate an outbreak of leprosy there The result of his inquiry has been to confirm prognostication which he expressed previously in the *Times* He finds that in the villages in which the disease is present cured fish of poor quality is imported and eaten in considerable quantities It is consumed not by the well to do, but by the peasants It is imported to add something savory to the vegetable diet of the fast days, especially of Lent He hopes soon to be able to supply custom house statistics as to the quantity of cured fish imported into the Valais He already knows that it is large and of two qualities—high class and coarse—and that the latter makes up the bulk and entirely goes to the peasants It consists chiefly of herrings, but "stock fish"—that is, dried cod, tunny or some large fish cut up into blocks—are also used Another fact which he regards as ominous was disclosed The fish comes only in the winter and spring months, because it will not keep in warm weather There is every reason to believe that the development of railroads has much increased the supply That the supply on the present scale is recent may be inferred from the fact that it is not known of except on the spot Mr Hutchinson was assured in the most positive terms before reaching Leuk that there was no fish eating by the Swiss peasantry They were said to be too poor to buy the imported article, while the fresh fish of the streams are too valuable for the peasantry to think of eating them He was told it would be useless to seek fish eaters in the mountains His informants were leading physicians in the cities and high officials who believed themselves well informed Not until he got to Leuk itself had he any hint as to the reality When he got there it was with the belief that it was hopeless to expect to obtain any direct evidence in support of the fish hypothesis of leprosy In India a precisely parallel experience repeatedly fell to his lot. When the custom house officials in Berne, at his request, for the first time, attempted to estimate the quantity of fish destined for the Valais, they were astonished There are no cases of leprosy in the town of Leuk itself, but in two or three of the adjacent villages All were comparatively recent, none of more than five or six years' duration The little village of Guttet, in which the cases of leprosy have recently been recognized, is on the mountain side, nearly a two hours' climb above the town of Leuk, and contains about 200 inhabitants The chalets are neat and comfortable There was not the slightest reason for suggesting that either poverty or neglect of cleanliness had taken any share in producing the disease It is doubtful how long leprosy has existed there. Its medical recognition dates back only ten years But the two families in which alone it occurred until quite recently may have had cases nearly half a century ago At any rate, none of the more remote cases has survived. Of the present 4 cases one patient is not related to either of the families concerned and a fourth had no connection with the village On the supposition that the disease has been present in two families in Guttet for 50 years without spreading to others, the facts are much better explained by the hypothesis of commensal communication than that of contagion in the proper sense It has been suggested that the cases are a survival from the middle ages Mr Hutchinson agrees with Prof Jadassohn, who has twice at the request of the Swiss government, examined the facts, that this is a most improbable supposition Mr Hutchinson thinks that in consequence of the use of decomposing fish the Swiss Catholic cantons are incurring the danger of leprosy

Plague Investigations in India.

The commission appointed by the government to investigate plague in India has issued a highly important series of reports Apart from the comparatively rare pneumonic form ordinary plague is found not to be particularly infectious, and man to man infection plays no important part in the spread of epidemics Plague, nevertheless, may be introduced into a new locality by the agency of man and the agent need not be a sufferer from the disease Definite localities, such as huts or rooms, in which plague has occurred among rats and men during an epidemic, are highly infectious Persons living or sleeping in such places are liable to contract the disease although similar close attendance on a plague case in a hospital or temporary camp is seldom dangerous The infection clings to the described localities, and with such tenacity that persons returning to them a month, or in some cases as much as 48 days, after they have been evacuated have promptly contracted the disease Plague can exist and spread under a great variety of climatic conditions, but when once it has become endemic it exhibits a marked seasonal prevalence Bombay, for instance, is never free from plague, but the incidence is relatively small from June to December In January and February the number of cases rises, at first slowly, then rapidly, and reaches a maximum in March and April, to fall again rapidly in the latter half of April and in May During the first named period the number of cases a month may be from 50 to 500, but during the height of the epidemics it may range from 4,000 to 7,000 In other parts of India the yearly outbreaks have shown similar periods of prevalence during particular months with complete or almost complete disappearance at other times but the months of prevalance in different localities are not always the same In the great majority of instances the outbreak of plague among men is associated with and generally preceded by, an epidemic among rats There are the strongest reasons for regarding the epizoötic as being the most important cause of the epidemic spread of the disease As to the part played by the flea in conveying the disease from rats to man, most important experiments have been made which include a careful anatomic examination of the suctorial apparatus of the flea It appears that the insect after making and enlarging its skin puncture, injects its saliva into the wound through one channel of its proboscis and withdraws blood through another As in the case of the leech, the injection of saliva presumably prevents coagulation of the blood with which it mingles, and may afford a means of injecting the bacilli of plague, although these have not yet been detected in the salivary glands The rat flea of India, unlike that of Europe, feeds readily on human beings Guinea pigs allowed to run free in plague-infected houses attracted a large number of fleas, mostly rat fleas, and 29 per cent of them died of plague The same results followed in houses which had been disinfected in the ordinary manner Fleas transferred from plague infected rats found dead or dying in houses transmitted plague to healthy animals Caged animals were placed in plague houses in pairs, completely protected from soil and contact infection, and equally exposed to aerial infection, but one of each pair was protected from fleas and the other not None of the protected animals contracted plague and several of the unprotected ones died from it Among the fleas arrested and caught by the protective apparatus a certain proportion were found to contain in their stomachs abundant bacilli identical with plague bacilli Another series of experiments showed that plague bacilli suffered no diminution of virulence in passing through the bodies of several successive rats, but that many of the Bombay rats are, comparatively at least, insusceptible to the plague virus, possibly because they have recovered from the disease The blood of infected rats was found to contain an enormous number of plague bacilli, as many as 100,000,000 per c c. being found before death Finally, the existence of what is described as chronic plague was demonstrated in rats caught in previously infected localities during periods of general subsidence of the disease, showing that plague in an unsuspected form may linger in the rat population and may again spring into virulence among them under the operation of unknown causes The whole of the experimental work appears to have been conducted with great skill Evidently the government of India is sparing no effort to cope with the disease

Medical Supervision of Children

At the second meeting of the newly founded British Child Study Association an important discussion took place on "The Medical Supervision of School Children" Dr Macnamara, M P, presided, and said that he considered the necessity of bringing the trained nurse and physician into direct touch with the child in the slum school of inconceivably more importance than the problem of the religious formulary to be imparted The present education bill takes a most admirable step, he said in providing for the compulsory medical inspection of children on admission to a public elementary school These views were confirmed by the other speakers

Sanatoriums for Postal Workers

The postal branch of the National Association for the Establishment and Maintenance of Sanatoriums for Workers Suffering from Tuberculosis has held a conference The association is building a sanatorium at Benenden, Kent, where an estate of 252 acres has been acquired Fifty two beds have been taken by various societies of workers The object of the conference was to consider the proposed rules of the postal branch of the National Association The postmaster general has consented that subscriptions be collected by means of deductions from salary The number of subscribers has now reached 32,000 Twenty five beds have been engaged in the projected sanatorium at an annual cost of $8 000 The income of the society provides ample funds for this purpose and leaves a good surplus for cases of emergency

The Prevalence of Dysentery in Asylums

The report for 1905 on asylums contains a most disheartening account of the prevalence of dysentery in these institutions The disease shows no signs of diminution In 1905 there were under treatment no fewer than 1,106 cases, of which 247 were fatal

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Naso-sinusal Heredity—Bichaton (*Rev Hebd Laryngologie* xxvii, No 25, June 23, 1906) reports five observations of sinusal disease with history of similar conditions in parents, and holds that they can not be considered as simple coincidents of heredity They seem to him to indicate a special transmitted tendency to inflammations of the sinusal mucosa which not only renders the subjects specially liable to such inflammations but also renders their lesions less amenable to treatment Two of his cases were [illegible] as regards this latter point

Correspondence

Interstate Reciprocity and Frauds in Medical Schools

Detroit, Oct 20, 1906

To the Editor —Owing to the importance of the subject involved, it seems necessary for me to reply briefly to the communication of Mr William C Tait, attorney for the California State Board of Medical Examiners, which appeared in The Journal, October 6 Dr Dudley Tait, his brother, and a member of the above board, in The Journal, September 1, called attention to a phase of interstate reciprocity involving fraudulent or defective diplomas, and assumed in the administration of medical reciprocity that all diplomas, including fraudulent and defective ones, were received as *prima facie* evidence (more properly, final evidence) of qualification In my reply, September 15, it was shown conclusively that the administration method employed in reciprocity in going behind the certificate presented for endorsement, should make absolutely impossible the acceptance of a fraudulent or even a defective diploma in reciprocity

So far, so good But Mr Tait, the lawyer, replies for Dr Tait, the board member, and attorney like, attempts to cloud the issue by extending the question of fraud and defect to the administration acts of members of state medical boards, and explains at length the method adopted in California to prevent unfairness and dishonesty on the part of the members in their duties as an examining board In this connection he admits that the method employed in reciprocity, of going behind the certificate to prevent fraud and to eliminate defects in so far as medical diplomas are concerned, is a sound one, but suggests that the process of investigation should be extended to the official acts of state board members

This suggestion of Mr Tait is begging the question The main object of medical reciprocity is the "elimination of the repetition of the tests of qualification" If the methods and reputation of a medical faculty were such that it would be advisable to have the examination questions and answers submitted to a board as a basis for recognition, then it were better not to recognize the college And if likewise, the methods and standing of a state medical board were such that the questions and answers should also be submitted as a method in the administration of a reciprocity agreement, it were also better not to have reciprocity with such a state It certainly would not be an equitable method to require from the board members evidence of honesty, competency and fairness, and not require from the faculty evidence of a like nature Mr Tait limits his suggestion to the members of the State Board of Medical Examiners

Mr Tait also discusses the reciprocity clause of the California statute He states

> It may interest the profession to know that the reciprocity clause of the California statute was before the Supreme Court of that state in the case, ex parte Gerimo decided on in 1904 Counsel of Gerimo an ex judge of the court, attacked the law on the ground of the alleged unconstitutionality of the clause in question Dr Harison himself has pronounced against the constitutionality of the particular clause, assigning as his reason that it fails to recognize the so-called rights of practitioners licensed without examination under the former legislation of other states. This objection was directed by the ex judge against the entire act. The Supreme Court, however brushed the objection aside, holding that the reciprocity provisions were not an integral part of the statute that they might be unconstitutional without impairing the validity of the remainder of the act, in which event, the court declared the effect would be to subject all applicants to the examination Of course if Dr Harison is right in his contentions that the provision for reciprocity is unconstitutional then all hope for reciprocity between California and her sister states is under present conditions gone, for certainly the board of examiners can not, at the instance of the enthusiastic apostles of that system make the statute constitutional

It is to be noted that the court did not pronounce the clause in question constitutional or unconstitutional It was contended that the clause was unconstitutional, and therefore impaired the validity of the whole act The court held however, that the clause might be unconstitutional without invalidating the act itself There was no necessity for the court going further in the matter in this particular case, but if the question of constitutionality of the reciprocity clause had been the direct issue, the court could have eliminated the restricted interpretation put on it by the California medical board, and therefore could have extended the intent of its meaning, purging it of the present retroactive quality given it by the board I have never contended that the clause itself was unconstitutional, but rather that the interpretation given it was unconstitutional.

Mr Tait states that California has never favored medical reciprocity from the fact that she considers absolute reciprocity a surrender to state sovereignty, and individual or restricted reciprocity too hard work and involving too much conscientious fulfillment, and so, therefore, he agrees with Dr Harvey's "dangerous tendencies and doubtful advantages of reciprocity" The hard work and conscientious fulfillment kind of reciprocity is the method in force in some twenty five states against which Mr Tait and his friends, including Dr Harvey, are directing their shafts Mr Tait accuses me personally of not reporting to his board, as invited, the fraudulent diplomas presented to my board Since receiving the invitation to report, I have not had a fraudulent diploma presented I wrote of rejecting defective diplomas—defective from the point of view that they did not fulfill the required standard If the California board lives up to the standard of the Association of American Medical Colleges, it also should have received defective diplomas as distinguished from fraudulent diplomas

On the presentation of a fraudulent diploma, I should consider it my duty not only to furnish the several medical boards in the United States with a record of such diplomas, but I should also furnish the directory department of The Journal with like information And in this connection I would suggest that all information concerning applicants likely to be of interest to other boards, should be sent to the directory department of The Journal, as it has volunteered, without expense to the boards, to keep a card index covering such matter and to furnish all such information to the boards on request

Before accepting an applicant from another state, especially when such an applicant has been in practice, a routine inquiry should be sent to the directory department, as well as to the secretary of the state board of which the applicant is a licentiate This applies to ordinary registrations as well as to registrations involving reciprocity B D Harison

Treatment of Paroxysmal Tachycardia

Baltimore, Oct 29, 1906

To the Editor —I should like to correct some false impressions that might be caused by your review (Oct 27, 1906, page 1417, paragraph 58) of my article on "Paroxysmal Tachycardia" In the review it appears that "Hirschfelder reports a case of paroxysmal tachycardia in which the patient's condition was improved very much by the administration of *2 mg atropin* within two hours The drug was used in *5-minim doses of the tincture*, repeated once or twice at half hour intervals"

The statement appearing in the original article (*Bulletin of the Johns Hopkins Hospital*, vol 17, p 339) was, however, that in order to determine whether or not the vagi were in tonic activity *between attacks*, the patient was given (between attacks) 2 mg atropin to paralyze the vagus endings This, however, failed to bring on an attack or even increase the pulse rate, indicating First, that in this patient the vagi were not in tonic activity, seondly, that something more than paralysis of the vagi was necessary to bring on an attack

Even the stimulation of the accelerators produced by mild exercise while the vagi were still paralyzed by the atropin did not bring on an attack So that, the mechanism underlying the paroxysms of tachycardia could not be definitely determined—but attention was called to the fact that "all the means that have been used successfully to suppress the attacks—viz. ice bag to the heart, deep inspiration, galvanism to the vagus nerve in the neck, digitalin, pressure on the vagus—depend for their efficacy on the direct or reflex stimulation of the vagus As might be expected from the uncertainty of their stimulating power, the results of these methods have been uncertain and variable The one drug which exerts the purest and most certain action in stimulating the vagus, viz., aconite, so far as I learn, has not been used.

"Our patient has no further attacks from March 15 to his departure from the hospital on March 25, and as no other cases

of paroxysmal tachycardia have been available, the use of this drug" (*aconite*, emphatically not *atropin*) "in small doses (5 minims of the 1900 pharmacopeial tincture once or twice at half hour intervals) can, therefore, only be suggested for the present"
Arthur D Hirschfelder.

Bad English.

Philadelphia, Oct 30, 1906

To the Editor —May I call attention to two very common instances of faulty English which I am constantly meeting in letters, in print, and in conversation? One is the assertion that "the patient had no temperature" I presume that the writer does not mean that the patient's temperature was zero, but that he had no rise of temperature beyond the normal Certainly a temperature of 98 4 F is universal in the well Any rise above that should never be called "temperature," but a "rise of temperature," or "no increase of temperature" If temperature falls below 98 4, to 97 or 96 F, how would those who speak of any rise above 98 4 F as "temperature" designate such a fall—"less than 'no temperature'"?

The other instance is really an atrocious misuse of the language I constantly hear it used orally In a recent letter occurred the phrase, "since my case, I have seen two others operated," and in a single number of an admirable, well known medical journal occur the phrases "the first case to be diagnosed or operated in P———," "three further cases have been observed and operated here," and two other similar transgressions

May I call attention also to a confusion of two similar terms? "Tubercular" and "tuberculous" are constantly used interchangeably At the last tuberculosis congress in Washington I proposed to the executive committee that we should recognize definitely in all our publications a distinction between the two words as follows *Tuberculous* shall be used only of those lesions caused by the tubercle bacillus *Tubercular* shall be used in describing those lesions which resemble tubercles, but which are not caused by the tubercle bacillus, for instance, tubercular syphilid, etc. This suggestion was adopted and the proposed usage approved

I hope that editors will do us the favor of correcting such errors
W W Keen

[We wish Dr Keen had included in his condemnation the expression "Three cases recovered and one died"—Ed]

Miscellany

EXPOSURE OF QUACKS

How the Fake Doctors of Cleveland Extort Money and Deceive Patients

Representing the *Cleveland News*, Mr Charles S Stuart has been carrying on an investigation of quacks and quackery in Cleveland, Ohio The *News* began this investigation to protect the people of that vicinity by giving publicity to the processes by which these quacks extort money from patients, and to bring to the public a realization of the terrible menace to the young and ill informed in the advertisements put forth by these "eminent specialists" and published in newspapers accessible to every member of the family The ultimate object is to rid Cleveland of quackery The results of Mr Stuart's investigation have been published in the *Cleveland News* for several weeks past

PRACTICE UNDER ASSUMED NAMES

One of the first cases investigated by Mr Stuart is that of Dr Charles A. Duff In the *Cleveland News* October 15, Mr Stuart says "He is not Dr Charles A Duff He is a medical college graduate, but practices medicine under an assumed name In reality he is Dr Carey Sargeant Ferris, and had the postal authorities known of his true identity, probably his mail would have been stopped long ago His certificate giving him the privilege to practice in Cuyahoga County is No 6379 in the Probate Court clerk's office The records say that he was graduated from Miami Medical College of Cincinnati April 1, 1892 It was a sad day for the public. In October, 1896, he was licensed by the state to practice medicine in Ohio He was recorded in Cuyahoga County May 29, 1903 He also is recorded as a practicing physician in Hamilton and Montgomery counties This record gives him the name of Carey S Ferris" Shortly after his graduation "Ferris went to Toledo as the employé of a fake medical concern He received something like $15 00 a week Then he went to Ft Wayne, Ind, as an employé of the State Medical Institution, which was conducted by L. A Morlan He (Morlan) came to Cleveland and brought C Sargeant Ferris with him C Sargeant Ferris was a high sounding name It looked good when Morlan purchased it from Ferris at $40 00 a week It was then the C Sargeant Ferris Medical Company Ferris was at first in charge of the correspondence, that is to say, when a poor victim wrote in Ferris' duty was to size up the letter and mark it with hints of the kind to lure the dupe on" Mr Stuart states that the picture of the supposed Duff which daily appears in the papers is that of a Dr Duff in Rochester, N Y

SOME QUACKS POSE AS REPUTABLE PHYSICIANS AT THEIR HOMES

The next case investigated by Mr Stuart was that of Dr Emil J Rose He says "In his offices, 158 Superior street, he is Dr Justin, French specialist At his home in the Bolton Apartments, Bolton avenue, he is Dr E J Rose On the Cuyahoga County Medical Register he is Dr Emil Justin Rose This is a pretty and artful manipulation of names and gives Rose an opportunity to pose and practice in the neighborhood of his home as a reputable physician and smoothly to take the money away from poor dupes urged into his net by disgraceful advertising in his downtown offices" Mr Stuart continues, "the standing of Rose with the rest of medical frauds is a peculiar one He is said to be the stingiest of them all He does not even employ an assistant in his offices though he is reputed to get a prize portion of the 'suckers' some newspapers send to 'quackdom' It hurts him, so it is said, to part with a penny With some others it is 'easy come, easy go'"

"Dr 'Erwin' is another of the chiefs of 'quackdom' who is ashamed to reveal his true identity in the indecent advertisements he flaunts before the public He is Dr Alexander Erwin Mintie, and for years he has resided at 107 Brookfield street under that name In the city directory he appears as Alexander E Mintie perhaps a further attempt to conceal from the public at large the fact that at 211 Superior street he is Dr Erwin I said that Dr Mintie is ashamed to reveal his identity in his advertising He frankly admitted this fact to me Wednesday morning"

VICTIMS TOLD THAT THEY HAVE PRIVATE DISEASES

"Since the *News* first turned the limelight on the Cleveland leeches who call themselves doctors, and placed the fraud brand on them, I have had opportunity to learn something of the little, inner tragedies of life which follow the visit to the office of Dr Quack By letter, postal card telephone and personal visit the stories of the victims of the quacks come to me Most of these are given in confidence I said in Article I that the greatest fortification behind which these doctors hide is the shame which they force on their patients When a patient leaves the office of Dr Quack it is practically an assured fact that he will speak to no one of what he has been told It would bring blushes to the cheeks of even the most brazen For that reason I can say that I am only surprised at the number who have volunteered to come boldly to the front and tell of their experiences'

Mr Stuart continues "Dr Carey Sargeant Ferris representing himself as Dr Charles A Duff gave me a guarantee to cure me of 'Prostatic Nephritis' a disease unknown to medical science Dr Charles A Duff now emphatically ad[illegible] that he treats all patients personally, w[illegible] tr[illegible] the real owner of the Duff office in th[illegible] expe[illegible] brought Duff post haste to the [illegible] vertises that he has competent [illegible] admitted that one of these

Ferris, practically a self confessed fraud Dr Duff advertises that should he take the whole burden of treatment on his own shoulders he would break down under the strain of overwork But Duff has been working here only since the *News* exposed the office which bears his name Duff advertises honest treatment and quick cure, but in my case his impersonator decided it would take weeks to cure me of ailments of which reputable doctors said I was free Duff wants to know if it is not better to trust him with a case in which he makes a specialty than the family physician, and he is given his answer"

A REFORMED QUACK CONFESSES HIS BUSINESS PRINCIPLES

In the Cleveland *News*, October 22, is published an article which is said to be written by a reformed quack He says, "Here are a few brief and essential axioms of the business Get the money Get it all Everybody and anybody is in bad physical condition on the first visit to your office There is no exception to this rule At times it is wise to cure a person of one ailment, but never fail to find another of serious nature before establishing the cure of the first. This policy is a great money getter Nobody is ever completely cured of everything Bleed the sucker until he dies or until he will absolutely no longer be coerced into your office Always be busy in your private office when the victim comes in, for five or ten minutes waiting in the reception room both impresses and frightens the patient Be fairly affable in greeting Learn as soon as possible how much 'cash' the sucker has and in what capacity he earns a living, or, in a word, how much he can afford to pay Then multiply this amount by two Always let the light shine full on the face of the patient and keep your own in the shadow While so situated paint graphically the horrors of the various ailments with which you tell him he is afflicted Keep this up until you see a flash of fear on his face. Then dilate further on the horrible character and inevitable termination should he not treat with you of the disease which brought the fear to his eyes Now is the time to get the money Get the fee for professional services all cash or as soon as possible, and then soak it to him for the medicines Don't be afraid to say that you can cure everything and anything, and give a 'legal' guarantee for the same Lastly, never bring your heart to the office with you It is not a money getter"

Association News

NEW MEMBERS

Of the American Medical Association for the Month of October, 1906

ALABAMA

Carraway, C N Pratt City
Casey L S Birmingham
Donald T C Bessemer
Farley A J Leeds
Moore Zadoc, Lamison
Morgan J R Shelby Springs
Sankey H J Nauvoo
Sibley B D Birmingham
Treadwell H P Hartford.

ARIZONA.

Swetman C R. K. Prescott
Wiley, H D Metcalf.

ARKANSAS

Chastain J S Prescott
Furbish L P Laconia
Johnston Wm Hardy
Smith, E. D Gilham.

CALIFORNIA

Eklund O E San Francisco
Fisher A. L. San Francisco
Hamilton Jos. Fruitvale.
Hulbert, R G San Diego
Morrison M A Fowler
Norton Thomas, San Luis Obispo
Pounds T C San Bernardino
Smalley C A. Los Angeles
Smith W O, Alameda.
Snook John Berkeley
Stafford, A. M. Corona
Van Denburgh J., San Francisco
Waldever Wilhelm San Francisco

COLORADO

Albi, Rudolph Denver
Friedman Emanuel Denver
Geiger Yont, Kate E Denver
John G H Denver
Johnston, W W., Wray
Kennedy J D, Denver
McDonnell J J Pueblo
Morrison, C S Colorado City
Robinson, W W, Loveland
Rupert, J K. Alamosa.
Slopansky F R., Denver
Strong J A Sterling
Tennant, C E Denver

CONNECTICUT

Bercinsky David New Haven
Coops F H Bridgeport.
Page, C. I Litchfield

CUBA.

Barney F M Fishermans Point

DELAWARE

Crawford, G G Wilmington
Gray O J Wilmington
Harmonson C G Clayton
Jones G Frank Georgetown
Palmer D D Bridgeville
Riley T G Harrington
Virdin Frank Kenton

DISTRICT COLUMBIA

Baker Frank Washington
Donnally H H Washington
Hamilton R. A. Washington
Jones, Louise T., Washington
Schneider F A Washington.

GEORGIA.

Aycock, W H., Molena.
Campbell, W H Chipley
Evans, W W, Millen
Grubbs, L F, Sylvester
Head, M. M., Zebulon
Miller, W A, Marietta.
Redding, D C D Warthen

IDAHO

Robinson, J W, McCammon

ILLINOIS

Asbury I M McLeansboro
Bak, D W, Chicago
Barr, C H Dwight.
Behrendt Alexander Chicago
Blech G M., Chicago
Brown M. R. Chicago
Butterfield, E H, Ottawa
Carroll C L., Taylorville
Dewey, Grace Jacksonville
Harlan, J D, Fairfield
Holmboe A., Chicago
Hutchinson, Robt. Capron.
Koehler, Gottfried Chicago
Lindley, A. M Urbana.
Lyon, C. M McLeansboro
McCall, T E Vienna
McDowell W D Chicago
McGrath W W, Savanna
Miller, R C Shannon
Moore W H, Dixon
Morton D F, Taylorville
Parker C. A Chicago
Shapiro H B Chicago
Struzynski L M Joliet.
Taylor J L. Springfield.
Thompson H L Harrisburg
Threadgill J M. New Douglas
Wagner T H Joliet.
Wedge D C Ipava.
Woodside E E Johnston City

INDIANA.

Barnes, G O Seymour
Bond, M L. Aurora
Broughton F K. Wolcottville
Cady N W Logansport.
Conger, C W Indianapolis
Cronk C. F Wolcott.
Eshleman, L. H Marion
Fleming H G, New Point
Grubb A. G Mongo
Holmes E S, Aurora
Johnson J E Marion
Kamman, G H Seymour
Kelly L. H Hammond
Kirkpatrick, A. M Columbus
Malone, B Elizabeth La Porte
Martin P F Indianapolis
Nierman H G Ft. Wayne
Tate J R, Milan
Pearson J R. Bedford.
Root, W W Parker
Sensenich R L. Wakarusa
Shrum Riley Bedford
Smith L F J Wabash
Spencer M J Indianapolis
Spurgeon W A. Muncie
Tepe G W Evansville
Thorner Moses Indianapolis
Venzey W M Avilla
Yager E J Otterbein

INDIAN TERRITORY

Puckett Carl Pryor Creek.

IOWA.

Bailey J W Nevada.
Baldwin L. A. Elliott.
Bickley C G Waterloo
Bowen F S Woodburn.
Craig J W, Lohrville
Crawford J L., Cedar Rapids
Fenton W J Mystic.
Frantz, C. P Burlington
Gilmore, J E. Monticello
Hobson A J Hampton
Johnson A. P, Sigourney
Kessell J E Riverton
Mahood W R. Sioux City
Martin J W Colfax.
Messenger W E Prescott
O Donoghue J H Storm Lake.
Plonske, C J Bancroft
Sparks F R. Clarinda
Tait T Eliot Creston.
Tinley Mary L Council Bluffs.
Uran J A Holland
Wilson H P Mediapolis

KANSAS

Bowen W F Topeka.
Brown T O Reading
Campbell W B Troy
Carver H F Circleville
Cave I R, Manhattan
Davidson C L. Waverly
Davis, A. C Hamlin
Egan Belinda E Waverly
Emerson F G Wellington
Farr, W A., Miltonvale.
Hall, James, Miltonvale.
Hindman J H, Humboldt
Iles, U G Seneca
Lewis A B, Hamilton
Liggett, E E, Oswego
Moffitt C J, Manhattan
Nelson C R, Washington.
Powers J H Little River
Simmons J W Culver
Tourigny Edward, Aurora
Van Voorhis, V C Robinson.

KENTUCKY

Chase, H S, Junction City
Davis M. S, Lexington
Bell, J D., Casky
Moore, P A Clinton
Pusey, H. M., Louisville
Rominger Louis Louisville
Shafer J I Louisville
Sheppard W D, Taylorsville.
Stewart, H B Spring Grove
Stone J E, Herndon
Wesley J T, Middleburg

LOUISIANA.

Moore, P A, New Orleans

MAINE

Cragin C L., Portland.
Hitchcock, H E Portland.
Small F E, Biddeford
Tibbetts R. R., Bethel
Willis J L. M. Eliot.
Withan, A. N Westbrook

MARYLAND

Abercrombie, R. T., Baltimore
Cobey J C, Frostburg
Hayward E H Baltimore.
Lacy J W Lisbon
Mattfeldt, C. L. Catonsville
Morris L W Salisbury
Riley J L. Snow Hill

MASSACHUSETTS

Bartlett, C. S, Gardner
Bartley J J Lawrence
Cusick I F Boston
Hess P W Winthrop
Hubbard G W South Hadley
Noyes W N Salem.
Palmer G M., Boston
Stone M. C Fitchburg
Sturnick Max Roxbury

MICHIGAN

Baert G H Grand Rapids
Breitenbach, O C Escanaba.
Carriel H T Marquette
Dodds J C., Detroit.
Dougher E J Midland.
Dryden, M. V Battle Creek.
Foust, E H Marshall
Handy J W Flint.
Hagadorn J W Lansing
Hanna, S C Detroit.
MacIntyre, D R., Ishpeming
Montford Willard Ithaca
Parker, J O Owosso
Roach J J Bennington
Robertson C. G Sandusky
Sarber H O Rockford
Seeley A. L. Mayville.
Vandeventer V H Ishpeming
Wilcox, Getrude L. St. Louis
Yale A. E W Bay Port.

MINNESOTA.

Holst, C F Little Falsl
Musgrave, Sam l Jr Minneapolis
Nessa, N J Brewster
Rains, J M Willmar

MISSISSIPPI

Boatner F P Myrtle
Montgomery W R Cornersville.
Steger J O Columbus.

MISSOURI

Adams Noah, Kansas City
Althans, Carl St Louis
Amerman I W Nevada.
Arnett, A Novelty
Bishop W T Hughesville.
Brandenburger L. A. St Louis
Brown L. S., Edina.
Chaffin W F Raymore
Clark, H M., Platte City
Cordry H V Boonville
Connolly P D St. Louis.
Dixon J C R West Plains
Ehrhardt R. T St. Louis
Foster T W Butler
Gish G J P Minden Mines
Gish J S Liberal
Gossow A. A. St Charles.
Graham I E St. Louis
Grim E A. Kirksville.
Grim E C., Kirksville
Cuhman M G, St Louis
Hallam J C St. Louis

Hardy, W F St. Louis
Hartmann J A, St. Louis
Hays B W, Jackson
Hempelmann L. H, St Louis
Hoeffer J P, St. Louis
Hoffmann, Phil, St. Louis
Howard A. P, St. Louis
King W E. Kansas City
Klein S, St. Louis
Klokke W E St. Louis
Lancaster, H W, Rich Hill
Lewis, Chas, St. Louis
Mankopf, B E, New Haven
Martin J Ross Merwin
Mattox W P Sullivan
McLemore, Tipton, Nevada
Montgomery, J S, Milan
Mudd J R St. Charles
Nichols, D J West Plains
Parker C W St Louis
Pipkin W D, Excello
Pitman John Kirkwood
Poignie F P, St Louis
Pollard H M, Shelbina
Rohlfing L. C. St. Louis
Shoemaker W A., St. Louis
Songer H E. Jamesport.
Steckman P M Plattsburg
Streutker C E F St Louis
Terrill, S J, Meta
Welch W A Callao

MONTANA.

Bruning L C Miles City
McCall, S H, Missoula.

NEBRASKA

Eigler C. O, North Bend
Marnell, F S Nebraska City
Weir, D A. Hastings

NEVADA.

Cope P E Goldfield.
Jones McMillan Carlin
Servoss G L Fairview

NEW HAMPSHIRE

Morrill S G Concord

NEW JERSEY

Alexander W G Orange.
Carman F F Montclair
Mills, A. M Newark.
Vaughan H, Morristown
Sprague E W Newark

NEW YORK.

Allen D B Saugerties
Auzal D W New York
Bailey, F C Adams Center
Baldwin Evelyn Rochester
Barnes J A. Troy
Basch Seymour New York
Beckary A. M., New York.
Beilby G E Albany
Beers, M I, Middletown
Berg H W, New York City
Best C. S Middleburg
Borst Nelson Poughkeepsie
Bourne, C W., Hamburg
Bradley, C. C, New York City
Branan J H., Albany
Bowen C R, Almond
Breckwedel H B New York
Brill, N E New York
Brooks P B Norwich.
Brown F T, New York.
Cannon G Watertown
Chase, B F East Syracuse
Clark J Bayard New York.
Conant J B Amsterdam
Culbert W L. New York
Cunningham T H Glens Falls
Davies R C, Granville.
Dawes S L Albany
Deely G L Brooklyn
De Wattoff D Boris New York
Dolley S R A Rochester
Dowd J Henry Buffalo
Dudley R B Clinton
Eddy D I Redwood.
Eddy J W, Oswego
Fairbairn H A Brooklyn
Falkenburg A F Whitehall
Farrar J N New York
Fedde B A Brooklyn
Finerty J J Buffalo
Forbes George Astoria L I
Forsyth F A., Buffalo
Fuller F D Utica.
Gilmore R Schenectady
Gibson C L New York
Gilbert Archibald Amsterdam
Goodfellow F H Gloversville
Gordon O A Brooklyn
Gribbon H A., Poughkeepsie
Guillemont Frank Niagara Falls
Guyer F N., Albany
Hallock S F New York
Harris J T Tonawanda
Haupt Louis New York
Hayden J R New York.
Heitzmann, Louis, New York.
Hermance E M., Yonkers
Hoffman C R., Glens Falls
Hollinger Wm. Newburgh
Hun, Henry Albany
Illston B F Jamestown
Jackson, J H Dansville
Jameson C. N Rochester
Jameson Thomas, Rochester
Jewett, Charles Brooklyn
Jones O E Rochester
Kasper, Gerard Brooklyn
Kidd, P E Brooklyn
Kinghorn H McL., Saranac Lake
Kirkpatrick R A., Troy
Klein, H O, New York
Lewis F A., Auburn
Loewe Jacques, Brooklyn
Ludlum, W D Brooklyn
MacDonald C F New York
Mason F C. Massena
McBrien F R., Niagara Falls
McCastline, W H New York
McCullagh, S New York.
McDowell N D Rochester
McGarrahan J F Cohoes
McNamara, S J Brooklyn
Mehl W M Buffalo
Menzie R. J Caledonia
Meyers George New York
Middleton John Buffalo
Morris, D J Brooklyn
Morrison D A., Buffalo
Morse H A Batavia
Mott, Valentine Woodbury
Middleton J I New York.
Miller J H, Niagara Falls.
Murphy D A Gloversville
Myers, T H New York
Neal G A. Alabama
Nellis W J Albany
Niesley C M Manhasset
Page S D Ithaca
Palmer M B., Rochester
Pashley Samuel Hartford.
Phelps R. H Norwich
Randel W A New York.
Reese R. G, New York
Reichers G H Brooklyn
Reilly F A Elmira
Reinhardt H M Buffalo
Reitz Charles Rochester
Robinson J A Elmira.
Rochester Haydon Rochester
Rood M. G Syracuse
Ross C M New Brighton
Scrimgeour Robert, Brooklyn
Shelley H T Middletown
Siegel Ferdinad, Brooklyn
Skinner C R Copake
Skinner W W Geneva
Smith G F Falconer
Stadlinger H F Buffalo
Strong A. E Mt. Vernon
Thomson A. N Brooklyn
Torney G H Jr Utica
Trick H R., Buffalo
Tuthill R K., Poughkeepsie
Van Hoesen Louis Hudson
Van Wagner L. C. New Berlin
Vedder J D Johnstown
Walton J S Amsterdam
Ward S B Albany
Warner H M Hempstead
Warren N A Yonkers
Waterman J S Brooklyn
Wilcox R A Phoenix.

NORTH CAROLINA

Allen R L, Waynesville
Ashmore W F Anderson
Baird J H, Mars Hill
Bass H H Henderson
Bradsher W A Roxboro
Sage J W Burlington
Weaver W J Marshall
Whittington W W Snow Hill

NORTH DAKOTA

Arneberg J G Leeds.
Young A A Hankinson

OHIO

Baldwin Henry Jr Springfield.
Bedinger D W Bellbrook
Blackburn M F Columbus
Blanchard I G., Woodville
Breck Theo., Breckville
Brown G N Hebron
Burns F M Cincinnati
Carr A H Reading
Chidester C W., Delaware
Fennel O W Cincinnati
Follett A K. Granville
Fraunfelter C. E. Canton
French G R Garrettsville
Gamble R A New London
Gates F S., Cincinnati
Gray Dan Ironton
Hardwick R., Cincinnati
Hocker Elizabeth Cincinnati
Hull J W., Toledo
Larimore F B Port Washington
Lindsay F T Xenia.
Lummis, G D Middletown
McBride Julia L. Mansfield
McGavran S B Cadiz
McLaughlin C C. Dunkirk
Montgomery C W Sycamore.
Moodie E L. Chatham
Nichols G R Wapakoneta
Parant, W H Lima.
Philo D W Woodville.
Pickett F S Cleveland.
Primrose I P Nelsonville
Puckhitsch E O, Cincinnati
Robinson P B. Put in Bay
Rutter H. C Columbus.
Sealover, W F Zanesville.
Semans W M. Delaware
Souther C. T, Cincinnati
Stall A H, Barberton
Taylor W C Springfield.
Topie, A. C. St. Bernard
Wheelock I A, Cleveland
Weller A B, Ostrander
White, U P Athens
Williams D R. Columbus
Zeller C W Defiance
Zinsmaster L. B Massillon

OKLAHOMA

Edwards R T, Oklahoma City
Myers D A., Lawton

OREGON

Nichols H S, Portland

PENNSYLVANIA.

Arnold J F Williamsburg
Becker H M. Sunbury
Billings F F Pittsburg
Brady S H, Lost Creek
Brown I A New Kensington
Burk S S Northumberland
Burgwin, C W Parkers Landing
Campbell C F Sunbury
Clark B F R, Narberth.
Clark W E Butler
Cressinger J B Sunbury
Dechert H W Orwigsburg
Deichler L. W, Philadelphia
Dennis A. L. Conneautville
Dickensheid L H Allentown
Dickson J R Gettysburg
Easton J S, Pittsburg
Gilligan J P Wilkesbarre
Gordon J W Clearfield.
Griffith D H Pittsburg
Groff G G Lewisburg
Grove L A, West Sunbury
Hammers J S Indiana
Hill R L., Glenfield
Holmes E. Burvill Philadelphia
Hunt J S Easton
Jenks H H Philadelphia
Johnson H D Cheltenham
Kennedy L T Pottsville
Klopp L. L. Philadelphia.
Knorr L. R Pittsburg
Kobler H B Philadelphia
Lindley C M, Washington
Loughridge S S, Philadelphia
Mackinney W H Philadelphia
Marsh W G Watsontown
McCorkle W P, Sheridanville
McMaster G C. Beechview
Miller M B Philadelphia
Nason I T McKeesport
Norris J F Johnstown
Petty O H Philadelphia
Piper F N New Kensington
Ressler G W Ashland
Saunders R R Philadelphia
Schildecker C B Pittsburg
Seidel C T W Transfer
Sherrer H S Bangor
Smith P F Uniontown
Sprowls W W Houston
Stanton C C., Sharpsburg
Steck C T Berwick
Terry G H B Wyalusing
Thomas J W Philadelphia
Walton L S., Pittsburg
Willetts F W Pittsburg.
Womer W A New Castle

SOUTH CAROLINA

Bates L B St Mathews
Briggs D K Blackville
Carpenter J W Greenville
Dreher T H St Mathews
Ellison P G Newberry
Hall H T Aiken
Jeffords T A., Orangeburg
La Borde Oscar Columbia
McCreary J A Williston
Moore R L., Columbia.
Merrall S. A., Trenton
Nesbitt J N Gaffney
Oliver J M., Orangeburg
Pou W L St Mathews
Rice H W., Columbia.
Simons E. W Summerville.
Sosnowski J C Charleston.
Taylor J H Columbia
Thompson J L., Columbia
Townsend, J B Anderson
Walter G H Orangeburg
Wheeler J S., Prosperity
Wyche C T, Prosperity

SOUTH DAKOTA

Billion T J, Sioux Falls
Clough A E, Madison
Herman, J D Conde
Langly C S, Lake Andes
Schwendener, J E, Bryant.

TENNESSEE.

Daniel W H McEwen
Guerin H C Dickson
Hawkins W H Greeneville
High B J Stonewall
Nash W S Knoxville.
Williamson G L. Jackson

TEXAS

Allen J I Cass
Bedford J D Honey Grove.
Blassingame A A, Denison
Campbell N W Willspoint
Carson J W Comanche
Cochran E G Greenville
Collier D S, Willspoint.
Decker C M San Antonio
Easterling A H Athens
Elliott, O C Waco
Ellis I D Troy
Gullette J I Pflugerville
Hendrick J P Huntsville
Kinney Perry San Marcos
La Rue R L. Athens
MacGregor W W Laredo
McClure R O Gilmer
McPherson D B Longview
Moseley E. M., Rusk
Perkins W F Tolar
Reifel J W Houston
Savage H B Honey Grove
Van Ness T M Prairie Lea
White I S Terrill
Zielinski A J Schulenburg

UTAH

Tyndale, W R Salt Lake City

VERMONT

Bean J H Jeffersonville
Cobb G N White River Jct

VIRGINIA

Angle S B Olney
Claud E H Portsmouth
De Cormis J L Acomac C H
Downer F C Edinburg
Everett J C Nelly's Ford
Fox, A. C Waynesboro
Glover Perkins Arvonia.
Martin Roger Raphine
Nichols R A Richmond
Piper W L Richmond
Randolph R C Boyce
Rucker M I Manchester
Skinner C L Rectortown
Smallwood J P West End
Tompkins G J Lynchburg

WASHINGTON

Cowan C B Seattle
Fell G F North Yakima
Fifield Ella J Tacoma
Hixon F I, Vancouver
West F S North Yakima
Zener C. R., La Center

WEST VIRGINIA

Amick W D Glenalum
Guthrie J A Huntington
Heslep W A St Albans
Ladwig Worthington Lost Creek
McCauley W H Sutton
Oesterling H I Wheeling
Tooley G W Huntington
Wheeler B B McKendree
Whitescarver J S Grafton
Williams J L., War Eagle

WISCONSIN

Beyer A C Milwaukee
Edsall J H Madison
Evans J I South Milwaukee
Habberger C J., Watertown
Helling A I Menominie
Holmberg Le Roy J., Cashton
Knauf C F Sheboygan
Nicholson W G., Green Bay
Niles W L New [illegible]
[illegible]
Overton C A [illegible]
Yanke A J Mil[illegible]
Zierath W L., [illegible]

WYOMING

Snyder O K C[illegible]

Marriages

F M Bell, M D, to Miss Laura Miles, both of Grant, Neb, November 7

Harry K. Gorsuch, M.D, to Mrs Alline Mosby, at Baltimore, October 20

A J Rudolf, M D, to Miss Jennie Perrizo, both of Delavan, Minn, October 24

J Henry Orff, M D, to Miss Viola M Darrah, both of Reading, Pa, October 18

Leonard A Richardson, M D, to Miss Nora R. Hand, both of Baltimore, October 24

William C Heintz, M.D, to Miss Laura L Buchsieb, both of Columbus, Ohio, October 25

Bruce D Hart, M D, Churubusco, Ind, to Miss Nina Merrill, of Prophetstown, Ill, October 18

Frank A Miller, M.D, Gowen, I T, to Miss Maudean Lewis, at Mena, Ark, October 17

W C Van Nuys, M.D, New Castle, Ind, to Miss Margaret Sword, at Reading, Kan, October 24

W James Howells, M D, to Miss Mary Gertrude Bannon, both of Spokane, Wash, October 24

James M Seliskar, M.D, Cleveland, Ohio, to Miss Frederica Cline of Medina, Ohio, October 24

Alfred Woodhouse, M.D, Trenton, N J, to Miss Helen L Prince of Elizabeth, N J, October 27

Carleton G Crisler, M.D, Cincinnati, to Miss Elizabeth Cropper of Bullittsville, Ky, October 26

John D Hunter, M.D, Kansas City, Mo, to Miss Rena Richards of Fort Scott, Kan, October 24

David Dale, M.D, Bellefonte, Pa, to Miss Anna Dunlop McPherson of Gettysburg, Pa, October 24

William H Weir, M.D, Cleveland, Ohio, to Miss Roslyn Campbell of Yorkshire, England, October 6

Brooke M Anspach, M.D, Philadelphia, to Miss Martha McCormick of Williamsport, Pa, November 1

Arthur Gordon Doty, M.D, to Miss Ruth Margaret Mac Ritchie, both of Hillsdale, Mich, October 25

Leo J Crum, M.D, Kalamazoo, Mich, to Miss Minnie Shorr of Cleveland, Ohio, at Kalamazoo, October 24

William Boyd Hight, M.D, Queen City, Mo, to Miss Winnetka Murphey of Des Moines, Iowa, October 16

John Thomas O'Mara, M.D, Baltimore, to Miss Josephine Euphrasia Larkin, at Pelham, N Y, October 10

Foster Way Burke, M.D, Laclede, Mo, to Miss Georgia Eunice Maxey of Kansas City, Mo, October 20

John A Ceconi, M.D, to Miss Louise E Roster, both of Boston, at Dorchester Lower Mills, Mass, October 25

Michael Frank Barrett, M.D, Brockton, Mass, to Miss Louise Grant of Boston, at Hingham, Mass, October 24

Maurice E Stayer, M.D, Woodbury, Pa, to Miss Maude Gardner of Rockwod, Pa, at Cumberland, Md, October 24

John Joseph Light, M.D, Lebanon, Pa, to Miss Sara Ada Bomberger of South Lebanon Township, at Reading, Pa, October 29

Deaths

John C Shrader, M.D College of Physicians and Surgeons, Keokuk, Iowa, 1865, Long Island College Hospital, Brooklyn, N Y, 1870, one of the organizers of the State University of Iowa, College of Medicine, Iowa City, formerly dean and emeritus professor of obstetrics, gynecology, clinical gynecology and diseases of children in that institution, formerly vice president and member of the executive committee of the American Public Health Association, formerly president of the Iowa State Board of Health and State Board of Medical Examiners, a member of the Iowa State Association of Railway Surgeons, a member and once president of the Iowa State Medical Society, a member of the American Association for the Advancement of Science, Cedar Valley, Eastern Iowa and Capital District Medical Society, British Medical Association, Western Association of Obstetricians and Gynecologists, and Association of State and Provincial Boards of Health, for two terms state senator, major and surgeon of the Twenty second Iowa Volunteer Infantry throughout the Civil War, commissioner of insanity for Johnson County, died at his home in Iowa City, after a long illness October 30, aged 76

Isaac C Walker, M D Cincinnati College of Medicine and Surgery, 1858, professor of diseases of the mind and nervous system in the Medical College of Indiana, Indianapolis, for 35 years, emeritus professor for three years, and in 1880 dean of the college, some time president of the Indianapolis Medical Society, president of the Marion County Medical Society, a member of the Tri State Medical Society, Indiana State Medical Society, a member of the Indianapolis city council for two years and its president for one year, an active and successful practitioner and forceful teacher, died at his home in Indianapolis, October 28, aged 79

Octavius A Crenshaw, M.D Department of Medicine of the University of Pennsylvania, Philadelphia, 1844, medical director of the Army of Western Virginia during the Civil War, and head physician of the White Sulphur Springs Hospital and Chimborazo Park Hospital, Richmond, one of the oldest and most distinguished practitioners of Richmond, Va, died at his home in that city, October 22, after an illness of only one week, aged 84 The medical profession of the city met with the Richmond Academy of Medicine and Surgery, October 23 to take suitable action regarding the death of Dr Crenshaw

Henry Ashley Root, M.D Cleveland Medical College, Medical Department of Western Reserve Medical College, 1866, a member of the American Medical Association, Ohio State Medical Society, Lucas County Medical Society, and for many years president of the Toledo Medical Society, for 21 years a member of the pension board, and for 25 years chief of the medical staff of St Vincent's Hospital, Toledo, died at his home in that city, October 24, after an illness of more than a year, aged 64

Joseph W Cooper, M.D Jefferson Medical College, Philadelphia, 1884, a member of the American Medical Association and Eastern Ohio Medical Association, for many years medical examiner for the Pennsylvania Company and the Carnegie Steel Company, at Bellaire, Ohio, and one of the most prominent physicians of that city, died October 28, at the Wheeling (W Va) Hospital, from tuberculosis

James L Johnston, M.D University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1863, a member of the hospital corps of the Army during the Civil War, president of the local pension examining board from 1884 to 1898, a member of the Eaton and Berry County Medical Society, died at his home in Chester, Mich, September 14, from cerebral hemorrhage, after an invalidism of 14 years, aged 70

Frederick R. Hudson, M.D Homeopathic Hospital College, Cleveland, 1882, formerly assistant surgeon, Second Infantry, N G, N Y, a member of the Association of Military Surgeons of the United States, of Hoosick Falls, N Y, died at the Hudson River State Hospital for the Insane Poughkeepsie, after an illness of three years, October 25, aged 50

Thomas Stevenson, M.D Bellevue Hospital Medical College, New York City, 1888, a member of the New York County Medical Society, surgeon to the nose and throat department of the Bloomingdale Clinic, died suddenly at the home of his brother, in New York City, from pneumonia, October 27, aged 41

Frederick W Fanning, M D University of Michigan College of Medicine and Surgery, Ann Arbor, 1867, for a number of years local surgeon of the Wabash Railway Company at Butler, Ind, died at his home in that city, October 26, from paralysis, after an illness of several months, aged 65

Vernon D Rood, M.D University of Vermont, Medical Department, Burlington, 1867, a member of the San Diego County Medical Society, and a veteran of the Civil War, died at his home in San Diego, Cal., October 26, from septicemia, supervening on diabetic gangrene, aged 68

Benjamin H. Masterman, M.D Medical College of Ohio, Cincinnati, 1880, health officer of Montgomery County, Kansas, a veteran of the Civil War, for 12 years a member of the district pension board, died at his home in Independence, Kan October 25, aged 60

Thomas J Mullaney, M.D Rush Medical Colege, Chicago, 1903, formerly interne in St Joseph's Hospital, Chicago, died in the Presbyterian Hospital, Waterloo, Iowa, October 23, from septic endocarditis, after an illness of two months, aged 29

John Barnett Matthews, St John's Medical Society, 1865, of Zebulon, Ga, for a number of years clerk of the Pike County Superior Court, died in Atlanta, May 4, two months after an operation for disease of the prostate gland, aged 66

Scott Mendenhall, M.D Atlanta College of Physicians and Surgeons, 1905, formerly of Jacksonville, Fla, died from the effects of an overdose of morphine, supposed to have been taken with suicidal intent, October 26, aged 25

J H Dewberry, M.D Jefferson Medical College, Philadelphia, 1857, a retired practitioner and prominent business man of Birmingham, Ala, died at his home in that city, October 26, after an illness of two weeks, aged 72

Isaac W Clinger, M D Physio Medical College of Ohio, Cincinnati, 1877, a veteran of the Civil War, died at his home in Springfield, Ohio, from cerebral hemorrhage, October 25, after an illness of one week, aged 58

Andrew C Lyngar, M.D Missouri Medical College, St Louis, 1876, a veteran of the Civil War, and for 25 years a practitioner of Opolis, Kan, died at his home in Pittsburg, Kan, from heart disease, October 24, aged 61

James B Shemwell, M.D Eclectic Medical Institute, Cincinnati, 1889, died at his home near Pitman's Ferry, Ark, October 23, from heart disease, following an attack of bilious fever, after an illnes of 10 days, aged 52

J L McCorkle, M.D University of Louisville, Medical Department, 1879, of Little Rock, Ark, died in the Pulaski County Hospital, Little Rock, October 26, after an illness of two weeks, aged 54

William R McKinley, M.D Medical College of Georgia, Augusta, 1904, formerly assistant surgeon at Fort Stanton, N M, died at the Augusta City Hospital, October 24, after an illness of several months, aged 26

Addison W Ball, M.D Medical College of Indiana, Indianapolis, 1883, of Indianapolis, died at the Indianapolis City Hospital, October 22, from cerebral hemorrhage, after a long illness, aged 57

James William Howard, M.D Willamette University, Medical Department, Salem, Ore, 1876, of Missoula, Mont., died recently and was buried in the Missoula Valley cemetery, October 23

Ruel Dwight Rice, M.D Eclectic Medical Institute, Cincinnati, 1846, surgeon in the Army throughout the Civil War, died at his home in Alameda, Cal, October 22, aged 86

Fleming G Tarver, M.D New York University, New York City, 1872, died at his home in Augusta, Ga, October 25, after a long period of invalidism

Joseph W Simrock, M.D University of Bonn, Germany, 1863, a laryngologist of New York City, died in Grindelwald, Switzerland, recently

Clinton Colegrove, M.D University of Buffalo, Medical Department, 1850, died at his home in Holland, N Y, October 19, aged 79

Edward H Anderson, M D Cleveland Homeopathic Medical College, 1894, died at his home in Cleveland, October 23, aged 62

W L Dean, M.D Atlanta (Ga) Medical College, 1878, of Woodstock, Ga, died in Atlanta, October 23, after a long illness

Deaths Abroad

P Merklen, M.D, lecturer on diseases of the heart and hospital physician at Paris, died October 13, aged about 50 He was a frequent contributor to the French medical press, most of his works being on affections of the heart, kidneys and skin

J Weinlechner, M D, professor of surgery at Vienna until 1901, when he reached the age limit, died suddenly September 30, while hunting, aged 78,

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The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers U S Army week ending Nov 3 1906

Palmer Fred W asst surgeon granted an extension of ten days to his leave of absence

Lewis William F asst surgeon ordered to Washington D C for examination for promotion

Davidson Wilson T asst surgeon granted leave of absence for two months

Duncan William A asst surgeon left Fort Logan Colo., on leave of absence for one month

Talbott Edward M., asst surgeon left Fort Leavenworth Kans for duty in the field with 3d Squadron 10th Cavalry from Fort Robinson Neb

Hoff John Van R asst surgeon general left Headquarters Department of the Missouri, Omaha en route to Manila P I for duty

Miller Reuben B Fagan Charles A., Eastman Wm R Hall James F Metcalfe R F., Rich, Edwin W Boyer Perry L. Phalen James M asst surgeons advanced from the grade of first lieutenant to that of captain from Oct 30 1906

Edger Benjamin J Jr, asst. surgeon assigned to duty at Fort Reno Oklahoma.

Cox, Walter, asst surgeon relieved from duty at Fort Reno Oklahoma and ordered to Fort Sill Oklahoma for duty

Hammond. Wm. G dental surgeon granted leave of absence for one month.

Jarrett, Arthur R., contract surgeon ordered from Fort Totten N Y to Fort Wood N Y for temporary duty

Kennedy James S contract surgeon, returned to Fort Omaha, Neb from leave of absence

Merrick John N contract surgeon granted an extension of one month to his leave of absence

Stuckey Harrison W contract surgeon left Fort Snelling Minn on leave of absence for one month

Pinquard Joseph contract surgeon ordered to Fort Robinson, Neb for temporary duty

Hayes Melville A. contract surgeon ordered from Fort Casey, Wash to Fort Stevens, Ore. for temporary duty

Harmon, Daniel W contract surgeon ordered from Nashville, Tenn to Fort Hancock N J for duty

Carpenter Alden dental surgeon relieved from duty at Vancouver Barracks, Wash and ordered to Havana Cuba for duty

Rebert Michael A contract surgeon returned from West Point, N Y to duty at Fort Totten N Y

Gregory Verdo B contract surgeon arrived at San Francisco Cal on leave of absence for three months.

Cutliffe William O contract surgeon granted an extension of 14 days to his leave of absence

Wall Francis M contract surgeon granted leave of absence for two months

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Navy Changes

Changes in the Medical Corps, U S Navy for the week ending Nov 3 1906

Byrnes J C medical inspector commissioned a medical inspector in the Navy from Oct. 7 1906

Fitts H B surgeon detached *Lawton* to *Buffalo*

Leach, P, surgeon detached *Indiana* to home and wait orders.

Lumsden G P surgeon, detached *Minneapolis* when placed out of commission to home and wait orders

Moore J M surgeon detached *Newark* when placed out of commission to *Indiana*

Iden J H, P A surgeon detached *Newark* when placed out of commission to home and wait orders.

Curtis L W surgeon to *Connecticut*

Odell H E, P A surgeon detached *Wisconsin* when placed out of commission to home and wait orders

Strine H F P A. surgeon detached Naval Hospital N Y to duty at Naval Hospital Newport, R I

Zalesky W J asst.-surgeon detached *Newport* when placed out of commission to duty at the Naval Hospital Portsmouth, N H

Mears J B asst surgeon detached *Minneapolis* when placed out of commission to home and wait orders

Farwell W G asst. surgeon orders to *Connecticut* revoked

Parker E C surgeon to Naval Hospital New York

Grove W B surgeon detached duty at the Naval Hospital Boston granted leave of absence for twenty days thence to *Iowa*

Bogan F M P A. surgeon discharged treatment at Naval Hospital Washington and granted leave of absence for three months

Payne J H Jr P A. surgeon to duty with Marine Recruiting Party Atlanta Ga

Ely C F asst. surgeon to duty at the Navy Recruiting Station Buffalo N Y

Hart G G acting asst surgeon detached duty at the Navy Recruiting Station Buffalo to duty at the Navy Recruiting Station Providence

Bucher W H surgeon detached from duty at the Navy Recruiting Station Providence and to duty at the Naval Hospital Boston

Dessez, Paul asst surgeon to duty at the Marine Barracks Washington D C

Field J G surgeon *detached from temporary additional duty* at the Marine Barracks Washington

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Health Reports.

The following cases of smallpox yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine-Hospital Service during the week ended Nov 2 1906

SMALLPOX—UNITED STATES

California San Francisco Oct 13 20 1 case
Illinois Galesburg Oct 13 27 15 cases
Missouri St Joseph Oct 6-13 2 cases
New York New York Oct 13 20 2 cases
Texas Houston Oct 13 20 1 case
Wisconsin Appleton Oct 13 27 2 cases

CHOLERA—INSULAR

Philippine Islands Manila Sept. 2 9 27 cases 24 deaths, Provinces, Sept. 2 9, 189 cases 146 deaths.

CHOLERA—FOREIGN

China Shanghai Sept. 15-22 1 case

India Calcutta Sept. 8 15 15 deaths Madras, Sept. 8 14 131 deaths

PLAGUE.

Brazil Pernambuco, Sept. 1 30 14 deaths Rio de Janeiro, Sept. 16-30 19 cases 5 deaths Sao Paulo Sept 16-23 1 death

Egypt Alexandria Sept 29 Oct. 11 8 cases, 4 deaths, Suez, 13 cases 10 deaths

India Calcutta Sept. 8 15 8 deaths

Turkey Adalia, Sept 20 23, 3 cases

Peru Lembayeque, Sept. 11, 1 death, Lima, Sept. 5 1 case, Trujillo Sept. 5, 3 cases

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Society Proceedings

COMING MEETINGS

Southern Surg and Gyn Assn Baltimore, Dec. 11 13
American Public Health Assn, Mexico City, Dec. 3 7

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK

Regular Meeting, held October 22, 1906

DR FLOYD M CRANDALL in the Chair

A National Anti Quackery Society

CHAMPE S ANDREWS, Esq, counsel of the society, after reviewing the work done during the past year and the great assistance that had been rendered the legal department by the United States Postoffice Department, through Postoffice Inspector William H Snow, and by the police department of New York through Police Commissioner Col. Theodore A Bingham, took up a consideration of the proposed national society for the preservation of the public health and morals For a number of years the legal department has called attention to the fact that its work was reaching only a small part of the field it should cover in the interests of public health Among the suggestions offered was one that included the formation of a new society, to have its branches in every state in the Union and in every city of any size in the country, these local branches to carry on the work against quackery, charlatanism and kindred subjects

In a lecture delivered in Philadelphia last March, Mr Andrews took occasion to elaborate on the necessity of forming a national society composed not only of physicians but of men and women in every walk of life interested in the suppression of quacks and quackery This has been worked out, and has been approved by the Young Men's Christian Association of New York City, the New York Academy of Medicine, American Medical Association, Cardinal Gibbons of Baltimore, National Women's Christian Temperance Union, education department of the state of New York, Philadelphia County Medical Society, Medical Jurisprudence Society of Philadelphia, Medicolegal Society of Philadelphia, Association of Neighborhood Workers in New York City American Public Health Association, Dickens Fellowship New York branch, American Society of Sanitary and Moral Prophylaxis, Emanuel Sisterhood of Personal Service, National Association for the Study and Prevention of Tuberculosis, the state's attorney of Baltimore, the Salvation Army, the Epworth League of the Methodist Episcopal Church, Luther Burbank, Julius M. Mayer, attorney general of the state of New York and W M L Coplin, director of public health of Philadelphia The letters from these sources endorsing the movement were then printed in one pamphlet, together with the proposed form of resolution authorizing the appointment of delegates to the conference to be held November 15, Hudson Theater, New York City Since that time over 100 societies have joined in the movement, and delegates are now being appointed from every section of the United States from every sort of public service society Mr Andrews said that it seemed safe to say that if the national society about to be formed availed itself of the materials lying on every side, waiting to be used against quacks and quackery, impure foods, adulteration of drugs and similar evils, then its success will be phenomenal and terror would seize the camps of these miserable charlatans who for so many years have preyed unmolested on the ignorance and credulity of the people of this country

Acute Pancreatitis Report of Five Cases

DR JOHN F ERDMANN reported five cases, three were hemorrhagic (in one of these the pancreas was almost completely destroyed without slough formation), and two resulted from abscess formation None of these cases was accompanied by the discharge of any slough, although sloughing was one of the terminations of an acute inflammation of this viscus The gall bladder was drained twice, each time for large numbers of stones In one of the remaining cases it was palpated and inspected without being drained In the remaining two cases it was not seen, owing to the pus collection being well to the left The cholecystotomy patient died, while two of the remaining patients recovered, and the third died two weeks after from exhaustion and multiple abscesses In conclusion Dr Erdmann called attention to some of the pronounced symptoms, the marked pain at the onset, the sharp intoxication in some of these cases, the dyspnea and lividity seen in many, the constant backache He emphasized the importance of early exploration when a given set of symptoms manifested themselves

Officers Elected.

President, Floyd M Crandall, vice-presidents, H Seymour Houghten and William Hallock Park, secretary, John Van Doren Young, assistant secretary, J Milton Mabbott, treasurer, Charles H Richardson

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MEDICAL SOCIETY OF CITY HOSPITAL ALUMNI OF ST LOUIS

Meeting held Oct 18, 1906

Physician and Pharmacist.

DR LOUIS H. BEHRENS welcomed the members of the pharmacal profession who were present, stating that as far as he knew, this was the first time in the United States that the medical profession had asked the pharmacists to discuss with them the great faults that have crept into both professions in their relationship to one another He said that both professions have taken on fads and charlatanism and bewailed the decline of the expert pharmacist who has nothing to do in filling prescriptions but pour proprietary medicines from one bottle to another

As for the medical profession, instead of using the remedies that have made medicine what it is to day, it is using proprietaries of unknown and uncertain composition. Take acetanilid, for instance. Those loudest in denouncing it are prescribing proprietaries having acetanilid for their main ingredient Some time ago there was a "cola craze." The profession was "cola mad" Now in the druggists' windows are seen immense advertisements with professional men's endorsements The reliable iron preparations have been dropped for the numerous albumin compounds of iron with their picturesque "blood counts" He called attention to the gullibility the profession displayed in using a product alleged to be made from the waters of a celebrated German spring, nothing but Glauber's salts

What is the cause, he asked, of this failing on the part of the two professions? Some lay it at the door of the doctor and others at the door of the pharmacist Certain it is, that in the modern drug store, there has been an improvement and an enlargement of the soda fountains, of the cigar department, a steady increase in the size of the patent medicine department, while the dispensing department, devoted to the compounding of physicians prescriptions, is usually found in the most poorly lighted, poorly ventilated, and the dirtiest part of the pharmacy An untidy prescription department means inferior drugs and substitution It is here that recklessness is manifested and potent drugs become inert There are physicians who still believe that some diseases are amenable to treatment with *the proper drugs, and that the scalpel is not always necessary*

The U S Pharmacopeia

DR H. M WHELPLEY secretary of the U S P Commission, reviewed the history of this book Pharmacopeia, according to its Greek origin, means a work directing the preparation of medicine and such was its meaning when the word was coined, but times have changed and the word to day means a book issued by some recognized authority for the purpose of furnishing physicians and pharmacists with a list of drugs and their methods of preparation " It differs from other books in that it is issued by some authority legally commissioned to establish a list of drugs of certain strength and purity In 1618, the London Pharmacopeia was issued with the stamp of authority of the city of London In 1639, Paris issued one, and in 1699 Edinburgh followed suit. France, in 1818, issued the first national pharmacopeia and the United States issued a national work in 1820 The first pharmacopeia issued in America was not a national work, being issued prior to the Revolutionary War as a list for a military hospital in Pennsylvania It contained 84 formulæ for internal and 16 for external use. The writer of this book states that the list of drugs would have been larger had there been a more plentiful supply of files in the hospital to hold them

There are now twenty three national pharmacopeias With a few exceptions, those countries not having one of their own, recognize one of some other country Central America, Liberia, Costa Rica, Cuba, Philippines and Porto Rico recognize the U S Pharmacopeia. Costa Rica adopted the U S Pharmacopeia in spite of the fact that most of her pharmacists do not read the English language

Dr Whelpley spoke of the great advantage of an international pharmacopeia, but did not believe that this ideal could ever be realized because of the uncompromising stand taken by the various revisionists of the several countries regarding certain drugs in their respective countries and the methods of preparation Yet a step was taken in this direction in Brussels, several years ago, by the calling of a conference to agree on a list of remedies to be used throughout the civilized world This conference decided on the strength of potent tinctures and the arsenic preparations The U S Pharmacopeia has adopted the recommendations of this conference

The original U S Pharmacopeia was printed in parallel columns of Latin and English, but the edition of 1840 dropped the Latin The eighth revision is being translated into Spanish for the benefit of Costa Rica and our island possessions

As to the nature of Pharmacopeial revision, in foreign countries it is issued by the Government In the United States it is established by a body of pharmacists Conventions are held every ten years, and a committee is appointed to follow rules laid down by the general convention At the present time twenty six men compose the committee Twelve of these men hold the degree of M D Only five of them are practising physicians A board of trustees looks after the edition and sale of the book Since this method has been adopted, the price of the book has been lowered from $4 00 to $2 50, even though the book has been growing larger The profits which come from the sale of the book are used in defraying the expenses of the revision The last convention was held in 1900 The next will be held in 1910 The revised Pharmacopeia is published and on sale from one to five years after the convention is held

The convention of 1850 was the first in which the pharmacist took a hand in the compilation of the Pharmacopeia In 1860 the members of congress who were graduates of regular medical colleges were invited to take part in the convention but this has not been followed In 1910 the convention will admit three delegates from each organization which was represented at the 1900 convention It will also accept delegates from medical and pharmacal colleges and state medical institutions They will also accept three delegates from the American Medical Association, the American Pharmaceutical Association and the American Chemical Association, also three from the United States Public Health and Marine-Hospital Service

The Pharmacopeia establishes the strength purity and method of preparation of drugs gives working formulæ and states the average dose of medicine used internally It does not treat of the therapeutic action of drugs which is taken up by commentaries such as the dispensary There are three dispensatories the United States, the National and the American as well as Remmington's and Casparis These commentaries are private enterprises

The legal importance of the eighth revision of the Pharmacopeia is recognized by the recently enacted pure food law Some of the state laws recognize it and some of the state boards recognize it. Some of the state laws mention the Pharmacopeia and the number will increase when the pure food law goes into effect on Jan 1, 1907 A peculiar condition exists in Illinois, where the law designates recognition for the seventh revision, while the eighth is now the authority The law is consequently a dead letter until this is changed The Chinese Pharmacopeia was written in 1558 and has not been revised since

The eighth revision of the U S Pharmacopeia contains twenty eight classes of preparations offering in all 958 preparations The Pharmacopeia originated at the hands of physicians Gradually pharmacists have taken an increased interest and physicians a decreased interest in it The attitude of the American Medical Association attests to a renewed interest in the Pharmacopeia The fact that some of the commercial drug houses are issuing epitomes of this work is an index of the pulse of the times Missouri is particularly at fault because only one physician from this state registered at the last convention, and he did not take any part in the work

The National Formulary

Prof Francis Hemm of the St Louis College of Pharmacy said that at the time when the American Medical Association took up the proprietary medicine question he asked the pharmaceutical profession to join hands with the medical men in adjusting this question The pharmaceutical society is busy taking steps to meet with the doctors. Circular letters are now being addressed to the medical men of St Louis inviting them to a meeting to take up these matters

He gave a review of the history of the National Formulary The present third revision of this book contains forty eight different classes of preparations consisting of palatable combinations He requested physicians to prescribe National Formulary preparations under their Latin names to prevent the passing of prescriptions from one to another, also to prevent the patient from reading the prescription, and to allow the pharmacist to get his proper remuneration The majority of people, he said do not appreciate the fact that the educated pharmacist is a professional man and is entitled to his just remuneration

The Prescribing of Proprietary Remedies

Dr J C Falk said that the majority of physicians do not know where to draw the line in the prescribing of proprietary medicines He described the methods of the average manufacturer in foisting on the profession unknown and uncertain preparations This tendency of using these proprietaries can be counteracted by a better knowledge of prescription writing and consequently a better teaching of this subject in the medical colleges The use of proprietaries depends on two forces first, the negative force within the physician, that he has not the proper knowledge of prescription writing second the positive force from without on account of the influence of the proprietary medicine manufacturer and his agents

Dr Falk described the plight of the young doctor called to attend his first case his dilemma in the presence of the suspicious patient his inability to write a prescription until there floats before his disordered intellect the name of some well known proprietary warranted to cure his haste to write it down as a prescription and thus the habit is formed The remedy for this evil lies in better teachir

Dr W G Moore spoke of the good work done by the American Medical Association in fighting the nostrum evil by *Collier's Weekly* and the *Ladies Home Journal* in fighting the 'patent medicine" evil He said that he had heard from druggists that since this crusade the patent medicine business is dropping off and that the druggist is glad to get rid of the patent medicine business entirely because it does not appeal to the better class

Dr. Bransford Lewis said that in New York City on Nov 15, 1906 there will be called a conference directed against the patent medicine evil a conference pres[illegible] [illegible] ded by the laity, with professional men part[illegible] ing

Section Discussions

DIAGNOSIS OF TUBERCULOSIS IN INFANTS

EDWIN E GRAHAM, M.D

(Concluded from page 1557)

DISCUSSION

Dr W P Northrup, New York City, said that in 125 autopsies he made an analysis on the question of the portal of entry and collected 13 cases in which the only tubercle in the whole body was in the lymph nodes clustered about the bronchial bifurcation With reference to prompt recovery from influenza, whooping cough, measles and pertussis, he always inquires whether the patients have had these diseases, and if so whether they have made complete recoveries without having a dragging fever or lumps in the neck Dr Northrup said that he had found typhoid fever rather unusual except in an epidemic In all cases of doubt of an irregular fever of moderate degree, with very little loss of flesh, if the patient has had the four diseases mentioned with slow recovery, the diagnosis of tuberculosis is the most probable one.

Dr J W Vanderslice, Chicago, said that in diagnosis there are two points which, although not always of value, suggest tuberculosis One is the accentuation of the second pulmonic, especially when there is a localized cog wheel respiration Recognizing a limited area of cog wheel respiration has enabled him to make a diagnosis of tuberculosis earlier than any other one symptom he can recall

Dr Arthur W Fairbanks, Boston, said that in the differential diagnosis of typhoid fever and tuberculosis in the adult there is a condition which he thinks applies also in children, viz , the difference in the relation between the pulse and temperature in the two diseases In tuberculosis the pulse is out of proportion in rapidity compared with the temperature There is often a temperature of from 100 to 101, a pulse of 125 to 130 in the adult Still more is it with the child In typhoid fever the conditions are exactly opposite, the temperature running higher, the pulse lower He was not fully sure of this last point in connection with typhoid in childhood, and spoke negatively of it, at Portland, last summer, but Dr Morse said he had seen it in a large number of cases in children On looking over a large number of charts Dr Fairbanks found that it does apply in children though not to the same degree as in the adult In tuberculosis the rapidity of the pulse is out of proportion to the height of the temperature, in typhoid the pulse runs much below the temperature, and may even be normal

Dr C G Kerley, New York City said that in the long indefinite temperatures sometimes seen in children, and difficult of explanation, it is wise, if they have had measles, grippe, or any of the infectious diseases, not to lose sight of the fact that the ear may possibly be the seat of the temperature He had frequently seen cases of otitis or mastoiditis with no other manifestation than this low indefinite fever from ten days to three weeks

Dr T J Elterich Pittsburg, said that too often the diagnosis of typhoid fever is made in children suffering from a pronounced temperature when latent tuberculosis is present The cases described by Dr Kerley of temperature continuing for several days and weeks in middle ear troubles are exceedingly common At the Allegheny General Hospital in children suffering from any acute or chronic diseases, the ears are carefully examined by an expert, and it is surprising to find the great number of patients who are suffering from middle ear affection in whom the diagnosis has been made of tuberculosis, typhoid fever, etc A few years ago he saw a child having a pronounced temperature for two or three weeks, which was regarded as typhoid fever, and ascites following diagnosis of cirrhosis of the liver was made by the attending physician Later this child was stricken with tuberculous meningitis and died within a few days, the latter diagnosis being confirmed by autopsy

Dr William J Butler, Chicago said that it is chiefly in infants and very young children that difficulties of differential diagnosis are met with So long as the tuberculin test is not popular for infants, there is only one absolutely certain method of differentiation in infants, and that is by post mortem The mere death of the infant, however, does not confirm the fact that it had tuberculosis, as such infants are far more likely the victims of bronchopneumonia. Temperature and pulse rate can hardly be relied on so far as the differentiation between typhoid fever, and tuberculosis or bronchopneumonia in children is concerned, because it is a matter of general observation that pulse rate and temperature in children do not conform to rules that will apply to the adult Dr Northrup's points are of greatest value in arriving at a diagnosis of tuberculosis that is, in patients with a previous history, whether of measles, pertussis, etc , in whom continuous fever, rapid emaciation and pulmonary symptoms with little local findings persist If there is anything that confuses one at times in the diagnosis of tuberculosis in infants, it is the decided disproportion between the clinical manifestations and the pulmonary signs present Too frequently in advanced tuberculosis in infants and very young children clinical manifestations may be severe and the local pulmonary findings may be very scant Especially is this so when the process has not resulted in a decided pulmonary involvement in the way of a bronchopneumonia, but in a disseminated miliary tuberculosis which not only attacks the lungs but also generalizes itself

Dr. E E. Graham said that his experience has been that the low pulse and high temperature of typhoid fever does apply in children, but not to the same extent as in the adult In the child the pulse does not keep as low as in the adult While the condition is of some aid, it is not of the same aid as it would be in the adult

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FOREIGN BODIES IN THE BRONCHI

EMIL MAYER, M.D

(Concluded from page 1555)

DISCUSSION

Dr E Fletcher Ingals, Chicago, agreed with Dr Mayer so far as operation is concerned He would not, however, insist on operations, even though he felt that they were the best It is better to tell the friends the chances and leave them to decide, without insisting too strongly They have to decide finally any way, and an operation be insisted on and the friends refuse it, and the patient coughs the object out after a little, the surgeon is placed in an unnecessarily awkward position If an operation be insisted on and the patient dies, the surgeon is again in an awkward position which it is not necessary to take. The same end is accomplished by explaining the conditions and chances to the friends and telling them what is thought best That has been Dr Ingals' practice It does not always work out satisfactorily because friends sometimes have very queer views Dr Ingals has removed many foreign bodies from the trachea by means of a straight and bent forceps and several from the bronchi by tracheotomy Much credit, he said, is due to Killian for his presentation of the results of bronchoscopy It is an operation that will add greatly to the laryngologist's usefulness in saving patients suffering from these accidents As to upper and lower bronchoscopy, the upper is much more difficult and requires more time, yet there are some cases in which it would be the operation of choice The method Dr Ingals finally adopted for introducing the tube has proved satisfactory in that the tube can be rapidly introduced, generally in not more than three quarters of a minute Before he adopted this plan he had much difficulty in introducing the tube, it took three quarters of an hour in one case After the tube is in place it can not be manipulated nearly so easily as a shorter tube from the trachea Lower bronchoscopy would be very much easier probably in the majority of cases Keeping the patient under an anesthetic as long as is necessary in upper bronchoscopy must sometimes be a detriment There are some cases in which tracheotomy alone kills the patient, and Dr Ingals has thought this a strong argument in favor of upper bronchoscopy, but having recently worked on a pa tient for an hour without removing the foreign body, although he found it, and having repeatedly seen how easy it is to lose a foreign body after having found it, and how hard it is to find it again, he is inclined to think that in most cases it would be better to do tracheotomy, as it would shorten the operation and probably lessen the danger However, there will be a certain number of cases in which upper bronchoscopy should be tried first Those in which the foreign body had been a long time in the bronchus would be most likely to yield good results As a rule, these patients have not been operated on because of fear of the operation by the patient or the friends, whereas consent might be obtained to upper bronchoscopy In children less than 3 years of age upper bronchoscopy would seldom be satisfactory because of the smallness of the tube that must be used In some children five or six years of age it works well In one little one of fourteen months in which a tracheotomy was done for fear that the tube could not pass through the glottis, Dr Ingals removed the foreign body with great ease The tracheotomy had been done perfectly, yet three hours after the operation the child gradually sank, grew weaker and died—from what cause could not be said In another case in which he did an upper bronchoscopy the foreign body was removed without great difficulty, though a little longer time was taken than in the other case The child appeared well after the operation, but in six hours sank and died, with symptoms like those just given He can not understand why these children should have died, because there was much less difficulty in removing the foreign body than in others that got well Perhaps the local application of cocain or adrenalin had something to do with the result, the drug having been applied so close to the vagus nerve Possibly it was secondary shock of which surgeons speak Possibly it was the long use of the anesthetic. Although Dr Ingals used chloroform, the amount given was not great because much of the time it was not necessary for the patient to be deeply anesthetized He did not think that a local anesthetic alone would be satisfactory, although he believed that it has been found sufficient by Killian in some of his cases

Dr Algernon Coolidge, Jr, Boston said that bronchoscopy for removal of foreign bodies is still in its infancy There is no question about the value of the operation but as yet it is not known what the mortality is, and in many cases it is not known whether the upper or lower passage is the best to adopt As far as he has been able to ascertain, if a foreign body is inhaled about 70 per cent of the patients will ultimately recover without operation When the method of removal consisted generally in tracheotomy followed by fishing down into the bronchi with forceps or hooks about 25 per cent of the patients died Until enough cases are reported of removal of a foreign body through upper or lower bronchoscopy to make a comparison, its full value will not be appreciated There can be no doubt that this is a life saving advance and that the danger of inhaling a foreign body has been much reduced As to the choice between upper and lower bronchoscopy, he thinks it will be some time before this can be definitely stated It must be different with different operators Upper bronchoscopy requires special skill and special apparatus Unless the special apparatus is on hand it is a waste of time and source of danger to the patient, that is, if some time is spent in an attempt to do upper bronchoscopy and it is finally abandoned for tracheotomy, the patient may suffer in consequence of the attempt Upper bronchoscopy, in a certain number of cases, assists in the diagnosis In Germany tubes are passed through the larynx and trachea into the bronchi as a routine measure in many clinics It seems to be an operation free from danger, and many cases are reported in which the diagnosis was made positive by this method It would seem that with proper instruments and skilled technic it is justifiable to pass a bronchoscope for making a diagnosis A requisite for upper bronchoscopy is suitable light There is no use in trying to look down a tube 35 c c long, of small caliber, with defective light That alone may be a reason for choosing the tracheal path An ordinary head mirror is generally insufficient to look down a long tube of small caliber The next absolutely essential instrument to have on hand is something with which to take the foreign body out after the tube is in

The absence of a proper extracting instrument for upper bronchoscopy might easily be sufficient cause for choosing the lower route Upper bronchoscopy is not an operation of emergency, it is an operation of the specialist, and for a specially equipped specialist The lower operation is one by which the general surgeon will be able to save the lives of many patients One thing the general surgeon must appreciate is that having done tracheotomy, a straight short tube, a urethroscope or cystoscope can be passed into the tracheal wound, turned at right angles and passed down to the lung Lack of appreciation of this fact induced surgeons for decades to fish down with forceps, in the dark, often not getting the body after all After tracheotomy is done a short probe can be pushed down to the bifurcation and can even be pushed well into a bronchus That is the whole foundation of lower bronchoscopy This knowledge will enable the general surgeon, by choosing a cystoscope of proper size, with forceps, to take foreign bodies out of the bronchi in the vast majority of cases

Dr. S H Large, Cleveland, Ohio asked Dr Mayer if he used a perforated tube, for if the seed blocked the right bronchus the patient could not breathe unless a perforated tube was used He called attention to Dr Crile's idea in working on the throat, i e, giving a preliminary dose of atropin and morphin before the operation Dr Large uses the direct method, and if unsuccessful, resorts to the indirect method The light he uses, and he has tried them all, is the electroscope After passing the tube down he uses a Klar reflector, and by it can get any focus and also a very strong light He uses the sitting position for diagnosis, then if he operates, the horizontal position, but in children always the recumbent position He asked Dr Mayer whether he uses ether or chloroform There are cases, he said, in which the *x* ray does not show the foreign body, on account of the shadow of the vertebræ or the smallness of the body

Dr. Sidney Yankauer, New York City, said that any condition, in which 35 per cent. of patients die, justifies urging surgical interference to save life It is impossible to tell in which class the individual case is placed. In a case in which he removed a foreign body, the child was in apparently good condition, and not very cyanotic Although it was only two hours until the foreign body was removed, being all that time impacted in the right bronchus, respiration in the right lung had entirely ceased and there was contraction of the intercostal space on the right side The passage of the bronchoscope through the larynx can be facilitated in this way Instead of introducing the guide first and looking for the laryngeal opening, then introducing the tube, the long tube is inserted into the guide and the two passed together The guide acts as a lever and the top of the guide being placed on the posterior surface of the epiglottis the entire larynx is raised in an anterior direction by means of the guide As soon as the larynx is brought into view through the long tube, and, as soon as inspiration takes place when the glottis is open, the tube can be pushed through without difficulty Of course, it is more difficult to look through the long tube than through the guide, and it is therefore harder to find the aperture of the larynx but any one who does bronchoscopy must become accustomed to looking through the long tube Whether upper or lower bronchoscopy should be done depends somewhat on the nature of the foreign body If it is of such a color and shape that it can be easily seen and grasped, the upper method is more favorable If, however, the body is of such a nature that its color corresponds with the color of the mucous membrane, or its shape such that there is difficulty in grasping it and holding it, then it is better to go through the trachea and to use the shorter and wider tube In one case in which the upper tube had been passed owing to the fact that a narrow tube had been used, the tube slipped past the foreign body The latter became lost between the bronchoscope and the wall of the bronchus The tube was pushed down to the bottom of the bronchus, but the foreign body was not found The color of this body was very similar to the mucous membrane

If a foreign body has lain in the trachea for months, the tracheal mucous membrane becomes ulcerated, the body becomes incrusted with lime salts, and under these circumstances it seems to be more difficult to find it It may be imbedded in an abscess and covered with pus Under these circumstances the attempt to remove it by the passage of a long tube would seem to be less favorable than to do a tracheotomy, using the shorter, wider and more manageable tube In young persons, Dr Yankauer believes that, in the majority of cases, it is advisable to do tracheotomy and lower bronchoscopy The prolongation of anesthesia from attempts to pass the upper tube is particularly dangerous because there is more or less inflammation of the lung following inhalation of a foreign body Lower bronchoscopy makes it easier and quicker for the operator to find a foreign body and to remove it, and the traumatism of a tracheotomy is not so great as the traumatism resulting from unsuccessful attempts carried on for a long time to introduce a tube through the natural passages

DR. F S CROSSFIELD, Hartford, Conn, said that the subject is one that necessitates the reporting of all cases of the kind, with the technic in operating, in order that all advantage may be taken of the successes of others In those cases in which the symptoms are not urgent he thinks it advisable, always to wait If the symptoms are urgent it is not worth while to bother with anything but the lower operation Do tracheotomy, go directly in, see the object and remove it at once It is not worth while to try the x ray, because almost all foreign bodies will not show A case occurred in his practice recently A child swallowed a kernel of red corn, it passed through the larynx and trachea, producing a severe cough at once The child was taken to the hospital The foreign body was supposed to be in the larynx, as there was loss of voice It could not be found in the larynx, however, and the child was placed in a ward The next day the left lung was entirely occluded, there was no respiration whatever An immediate operation was deemed necessary, but first by irritating the larynx an attempt was made to produce a spasm and severe cough This was a success The patient was immediately tipped backward over the edge of the bed and the cough expelled the corn

DR. B R. SHURLY, Detroit, Mich, said that in view of the fact that the use of the bronchoscope is to be classified as a possible emergency operation, all the larger places should certainly be equipped with the necessary instruments for this operation when required It should be classed in much the same way as the operation of intubation Dr Shurly has been through the difficulties of trying to learn to use the bronchoscope and he found a great deal of value in using the instrument on a dog at first.

DR EMIL MAYER, New York City, said that whether an operation should be insisted on or not, that depends to a great extent on the case In illustration of the value of such experiences, he said that the history of his connection with bronchoscopy dates back to the time when Dr Ingals and Dr Coolidge presented specimens of foreign body in the bronchi that had been removed from little Chicagoans and Bostonians and it seemed to him that little New Yorkers would surely have something of the same kind When he returned home the only bronchoscopic instruments in the city were in the possession of Dr Gleitsmann Dr Mayer's assistant, Dr Yankauer, made a temporary set and whenever they had any spare time they did bronchoscopy on the bodies at Mt Sinai Hospital Within a few weeks after working on these bodies the first case of a foreign body in the bronchi came to them The rapid introduction of the tube will come eventually The method of experimenting on the dog has the advantage of giving a knowledge of the mucous membrane With the hot breath coming into his face and the mucus pouring into the tube, as it does the surgeon can get nothing like it with the dog The laryngeal image of the dog, if it has received a good dose of morphin to keep it quiet, is one of the easiest things possible to get A view of the larynx can be obtained a tube can be introduced and direct bronchoscopy can be done without difficulty Dr Mayer invariably uses ether, never chloroform Dr Mayer considers the Klar reflector perhaps the best so far as illumination is concerned, it is superior to the Kierstein, which gets very hot He thinks that the introduction of the guide and the tube at the same time is not so easy as it might seem The guide is short, has a handle and the tube is long and has a handle, and the surgeon is very far away, which adds to the difficulty To sum up, he said, the main point is that bronchoscopy is one of the most recent advances in special work The number of cases heretofore recorded have been recorded by the fewest men He said that he believes it safe to say that in this country not one dozen men have reported experience with bronchoscopy, and it is only to record his experience, his failure in one case and success with the others, that he has presented the subject Regarding the case that ended fatally, had he seen the case and decided for himself whether the patient should wait or not, he is confident he could have saved the life. It is only by knowing other men's experiences and comparing results that a maturer understanding of this still new subject can be reached

Medical Organization

Mississippi.

TRI COUNTY (PIKE, LEVISON AND COPIAH) MEDICAL SOCIETY—More than 30 physicians representing the physicians of Pike, Levison and Copiah counties met in Brookhaven, July 18, and organized a Tri County Medical Society with the following officers Dr Dudley W Jones, Fernwood, president, Drs James A. Rowan, Wesson, James W Bennett, Brookhaven, and C H. Bates, Sykes, vice presidents, and Dr William H Frizell, Brookhaven, secretary and treasurer

TATE COUNTY MEDICAL ASSOCIATION.—The physicians of Tate County met at Senatobia and organized a county association with the following officers Dr Montgomery C Ellis Senatobia, president, Dr John M Phillips, Strayhorn, vice president, and Dr W D Potter, Senatobia, secretary and treasurer

Montana.

TRI COUNTY (ROSEBUD, DAWSON, CUSTER) MEDICAL ASSOCIATION—The physicians of Rosebud, Dawson and Custer counties met at Miles City and formed a society on the standard plan, with the following officers President, Dr Wyman W Andrus, Miles City, Custer County, vice president Dr Hathaway, Glendive Dawson County, and secretary and treasurer, Dr Henry J Huene, Forsyth, Rosebud County

Missouri

SULLIVAN COUNTY MEDICAL SOCIETY—The physicians of Sullivan County met at Milan, June 26 and reorganized the county society with the following officers President Dr William L. M Witter, and secretary and treasurer, Dr John S Montgomery, both of Milan.

Nebraska

FURNAS COUNTY MEDICAL SOCIETY—At a meeting of physicians of the county, held in Arapahoe, the medical society was reorganized and the following officers were elected President, Dr Clarence C Green, Beaver City, vice president, Dr Arthur B Hardin, Arapahoe, and secretary and treasurer, Dr L Wallace Rork, Oxford.

New York.

YATES COUNTY MEDICAL SOCIETY—The Yates County Medical Society has recently been organized at Penn Yan on the standard plan, with the following officers President, Dr Charles M Van Dyke Himrod, vice president, Dr Cyrus C Harvey, Dundee, secretary, Dr Harry S Tuthill, Penn Yan, and treasurer, Dr Charles E Doubleday, Penn Yan

Indian Territory

TWENTY THIRD DISTRICT MEDICAL ASSOCIATION—A meeting for the organization of this society was held in Coalgate, when the councilor for the central district, Dr Eliphalet N Wright, Olney, organized a society on the standard plan, with the following officers President, Dr Thomas J Long, Atoka, vice president, Dr M P Skeen, Wapanuck, and secretary and treasurer, Dr Leonard S Wilbouer, Olney

Pennsylvania.

FULTON COUNTY MEDICAL SOCIETY—The organization of this society was effected at a meeting held in McConnellsburg with the assistance of Dr Thomas M Livingston, Colum bia, councilor for the fourth and fifth districts, and the following officers were elected President, Dr William L McKibben, McConnellsburg, vice president, Dr James S Swartzwelder, Needmore, secretary, Dr George M. Robinson, McConnellsburg, treasurer, Dr John W Mosser, McConnellsburg, and censors, Drs Harry C McClain, Hustontown, and Samuel S Hoop, Andover

Virginia

SOUTH PIEDMONT MEDICAL ASSOCIATION—A physicians' society was recently organized at South Boston, with the following officers Dr S T Anderson Kent, Ingram, president, Drs Henry B Melvin, Houston, William L. Robinson, Danville, and William R Gregory, Keesville, vice presidents, Dr George A Stover, South Boston, secretary, and Dr James L Kent, Lynchburg, treasurer

Medical Education and State Boards of Registration.

COMING EXAMINATIONS

MAINE Board of Registration in Medicine Portland November 13 Secretary, Wm J Maybury Saco

CONNECTICUT Medical Examining Board City Hall New Haven, November 13 14 Secretary Charles A. Tuttle New Haven

MASSACHUSETTS Board of Registration in Medicine, State House Boston November 13 14 Secretary Edwin B Harvey State House Boston

WEST VIRGINIA State Board of Health The Frederick Huntington November 13 15 Secretary H A Barbee Point Pleasant.

MISSOURI State Board of Health, Kansas City November 26-28 Secretary J A B Adcock Warrensburg

NEW MEXICO State Board of Health Santa Fe December 3 Secretary, Dr B D Black, Las Vegas.

PENNSYLVANIA State Medical Examining Board, Industrial Hall Philadelphia December 4-7 Secretary Dr Joseph E Willetts Pittsburg

WYOMING Board of Medical Examiners, State Capitol Cheyenne December 5 Secretary Dr S B Miller Laramie.

DELAWARE State Medical Society Examining Board Dover December 6 and by the Homeopathic Board at Wilmington on same date Secretary of the Medical Council Dr P W Tomlinson Wilmington

OHIO State Board of Medical Registration and Examination Columbus December 11 13 Secretary Dr Geo H Matson Columbus

IOWA State Board of Medical Examiners, Office of State Board of Health Des Moines, December 11 13 Secretary Dr J F Kennedy Des Moines

VIRGINIA Medical Examining Board Richmond December 11 14 Secretary Dr R. S Martin Stuart.

MARYLAND Board of Medical Examiners 847 N Eutaw St. Baltimore December 12 Secretary Dr J McP Scott Hagerstown

OKLAHOMA Board of Medical Examiners Guthrie December 26 Secretary Dr J W Baker Enid.

Maryland June Report.—Dr J M Scott, Secretary of the Board of Medical Examiners of Maryland, reports the written examination held at Baltimore, June 20 23, 1906 The number of subjects examined in was 9, total number of questions asked, 54, percentage required to pass, 75 Ninety six candidates were examined, of whom 77 pased and 19 failed

The following questions were asked

ANATOMY

1 Describe the upper extremity of the femur 2 Describe briefly the elbow joint. 3. Name the accessory sinuses of the nose. 4 Describe the collateral circulation after a ligation of the external iliac artery 5 Name and give location of the salivary glands and state just where their ducts empty 6 Describe the portal system of veins.

SURGERY

1 What are the general principles governing the treatment of fractures at or near joints? 2 What conditions require and what is the usual method of performing (a) thoracentesis (b) resection of ribs. 3 Give the treatment of a sprain of the ankle joint. 4 (a) Give the differential diagnosis between chancre chancroid and herpes preputialis (b) Give in detail the proper treatment of each 5 Stating your reasons give what you consider to be the most suitable suture material for (a) anastomosis of the intestines (b) uniting the peritoneum (c) muscles of the abdomen (d) closing skin 6 Give the treatment of severe shock after severe injury or after a major surgical operation

PATHOLOGY

1 Define the following terms Coccus bacillus spirillum anaërobe facultative anaërobe Name one anaërobic organism 2 Name the pathogenic cocci. Give the morphology and method of staining of each and name the varieties usually found in the following diseases Furunculosis tonsillitis, purulent salpingitis 3 De-

(Continued on page 1590)

The following colleges were represented

PASSED

	Year of Graduation	Anatomy	Surgery	Pathology	Obstetrics	Practice	Chemistry	Mat. Medica	Therapeutics	Physiology	Average.
Geo Washington Univ	1905	71	85	64	100	80	90	79	87	93	85
Geo Washington Univ	1906	87	78	78	90	86	75	75	75	82	80
Geo Washington Univ	1906	75	85	60	83	78	75	65	69	83	75
Geo Washington Univ	1906	78	80	85	85	86	84	88	85	88	84
Univ of Maryland	1906	90	95	90	100	79	85	83	88	95	89
Univ of Maryland	1906	80	90	66	85	82	76	78	85	81	80
Univ of Maryland	1906	81	90	77	83	85	20	88	93	87	77
Univ of Maryland	1906	88	95	92	100	88	40	68	92	92	84
Univ of Maryland	1906	93	90	92	100	88	86	86	92	98	91
Univ of Maryland	1906	78	95	78	90	87	58	79	84	97	82
Univ of Maryland	1906	79	95	85	100	86	88	78	82	97	87
Univ of Maryland	1906	91	98	96	100	89	93	94	93	95	94
Univ of Maryland	1906	77	85	88	90	77	77	85	88	84	83
Univ of Maryland	1906	73	85	83	80	75	84	78	85	90	82
Univ of Maryland	1906	78	90	70	90	75	52	84	76	80	77
Univ of Maryland	1906	90	92	87	100	81	81	78	85	90	87
Univ of Maryland	1906	94	90	80	90	78	84	87	90	97	87
Univ of Maryland	1906	76	80	69	100	83	68	83	78	80	79
Univ of Maryland	1906	91	94	94	85	89	88	69	73	83	85
Univ of Maryland	1906	80	95	68	90	83	71	93	94	85	84
Univ of Maryland	1906	88	92	88	90	80	78	88	90	81	87
Univ of Maryland	1906	88	90	57	80	75	48	80	82	75	75
Univ of Maryland	1906	79	95	76	100	69	49	79	87	60	77
Univ of Maryland	1906	88	80	78	90	83	45	72	90	81	78
Univ of Maryland	1906	69	80	78	90	70	45	79	83	81	75
Univ of Maryland	1906	79	90	76	65	80	50	78	82	75	75
Univ of Maryland	1906	80	90	88	75	76	91	90	92	91	83
Univ of Maryland	1906	70	75	75	90	75	51	79	85	75	75
Univ of Maryland	1906	78	80	81	95	75	75	77	82	87	78
Univ of Maryland	1906	87	98	85	100	78	85	85	92	100	90
Univ of Maryland	1906	90	85	94	85	88	60	76	95	85	84
Univ of Maryland	1906	89	90	78	90	84	75	85	90	80	83
Univ of Maryland	1906	89	90	90	100	93	80	88	95	85	90
Univ of Maryland	1906	80	85	53	90	90	80	79	93	75	75
Univ of Maryland	1906	92	95	97	100	85	75	91	88	95	90
Univ of Maryland	1906	87	95	95	75	91	85	74	77	97	86
Univ of Maryland	1906	74	95	81	95	75	78	89	92	87	85
Univ of Maryland	1905	56	90	76	90	75	50	74	87	68	75
J Hopkins Med. Sch l	1906	83	90	94	85	92	95	84	90	90	89
J Hopkins Med Sch l	1906	78	90	92	100	90	76	92	88	96	89
J Hopkins Med Sch l	1906	91	95	84	85	83	76	82	85	89	85
J Hopkins Med Sch l	1906	90	95	96	100	93	94	92	95	100	93
J Hopkins Med Sch l	1906	92	80	89	84	84	94	90	90	96	88
J Hopkins Med Sch l	1906	66	85	97	75	92	91	80	95	95	86
J Hopkins Med. Sch l	1906	92	96	97	90	92	96	89	97	90	93
J Hopkins Med Sch l	1906	89	85	98	90	93	96	87	90	98	89
J Hopkins Med. Sch l	1906	88	100	92	90	90	80	90	92	100	91
J Hopkins Med Sch l	1906	91	95	90	80	90	94	95	95	96	91
J Hopkins Med Sch l	1906	79	95	98	95	92	84	87	93	98	91
J Hopkins Med. Sch l	1906	81	95	96	90	97	89	87	95	98	92
J Hopkins Med. Sch l	1906	96	95	96	90	93	50	85	85	95	83
J Hopkins Med. Sch l	1906	91	100	96	84	85	65	98	93	96	86
J Hopkins Med. Sch l	1906	92	90	91	90	99	85	93	92	95	91
J Hopkins Med. Sch l	1899	89	95	96	95	97	91	87	90	100	93
Baltimore Med Coll	1906	75	80	57	90	79	49	90	80	75	75
Baltimore Med Coll	1906	80	90	62	95	77	60	81	78	100	81
Baltimore Med. Coll	1906	56	90	92	90	81	50	78	92	95	79
Baltimore Med Coll	1906	97	98	88	90	89	75	78	95	100	89
Baltimore Med. Coll	1906	84	80	75	90	75	60	70	93	85	79
Baltimore Med Coll	1906	76	90	84	80	82	25	90	85	93	75
Baltimore Med Coll	1906	73	80	80	90	83	45	77	86	97	80
Baltimore Med Coll	1906	96	90	98	100	97	85	81	94	100	93
Baltimore Med Coll	1906	88	90	91	90	90	90	92	88	87	89
Baltimore Med. Coll	1906	84	95	99	100	95	95	97	97	98	94
Balt'more Med Coll	1906	81	90	93	85	78	88	71	80	98	84
Baltimore Med Coll	1906	75	85	75	90	87	64	92	93	93	83
Baltimore Med Coll	1906	67	75	69	90	77	50	80	78	70	75
Coll of P & S, Balt.	1906	90	95	93	80	80	80	76	92	90	80
Coll of P & S, Balt.	1906	75	80	77	85	79	79	89	75	88	80
Coll of P & S, Balt.	1906	87	75	98	80	81	60	75	77	90	77
Coll of P & S, Balt.	1906	91	90	82	90	89	93	93	90	100	90
Coll of P & S Balt	1906	91	90	86	80	88	50	98	81	83	79
Jefferson Med Coll	1904	75	90	75	85	79	76	93	80	77	81
Jefferson Med Coll	1906	87	95	75	90	88	75	90	75	88	85
University of Virginia	1906	98	98	75	85	86	75	80	90	78	81
Univ of Leinberg Aus	1902	88	100	92	80	90	98	82	90	95	90
Maryland Med Coll	1906	71	85	61	90	81	77	82	85	66	77

FAILED

	Year of Graduation	Anatomy	Surgery	Pathology	Obstetrics	Practice	Chemistry	Mat. Medica	Therapeutics	Physiology	Average.
Univ of Maryland	1906	82	95	62	85	75	34	65	77	75	72
Univ of Maryland	1906	62	90	57	95	76	83	71	69	90	71
Univ of Maryland	1906	58	85	71	85	75	48	71	77	85	72
Univ of Maryland	1906	75	85	28	75	75	19	74	77	67	63
Univ of Maryland	1906	61	75	67	90	70	48	68	82	70	70
Maryland Med Coll	1906	48	50	59	75	77	27	87	67	84	63
Maryland Med Coll	1906	39	72	32	80	75	20	77	80	68	60
Maryland Med Coll	1906	22	40	26	80	49	12	45	40	81	44
Maryland Med Coll	1906	73	65	68	75	61	58	83	80	75	70
Coll of P & S Balt	1906	50	70	54	75	67	38	69	67	63	61
Coll of P & S, Balt.	1906	39	75	37	95	69	65	75	85	75	68
Baltimore Med Coll	1906	30	70	50	90	77	38	77	75	80	65
Baltimore Med Coll	1906	50	80	27	75	66	58	87	80	66	65
Baltimore Med Coll	1906	81	70	53	85	84	70	68	70	90	71
Baltimore Med. Coll	1906	55	77	55	75	67	20	62	[illegible]	60	58
Long Is Coll Hosp	1905	72	87	30	75	63	65	31	77	69	62
Jefferson Med Coll	1906	68	77	52	80	81	76	79	81	67	[illegible]
Jefferson Med Coll	1906	63	75	56	90	77	42	69	77	68	[illegible]
Jefferson Med Coll	1906	65	80	59	80	76	47	78	78	79	71

scribe in detail the process of cavity formation in a case of tuberculosis of the lungs Give the morphology of and describe in detail the method of staining of the tubercle bacillus Name two other bacilli with similar staining properties 4 Describe the pathologic changes as regards the urinary tract one would expect to find in a case of hypertrophy of the prostate of long standing 5 Describe macroscopically the changes one would expect to find in the appendix and surrounding structures in a case of catarrhal and one of gangrenous appendicitis respectively 6. Give a gross and microscopic description of a cross section of a myomatous uterus. In what other localities is this species most frequently found?

OBSTETRICS AND GYNECOLOGY

1 Describe the preliminary arrangements and preparation for an approaching accouchement. 2 What is your treatment for a case of placenta prævia about the eighth month of pregnancy? 3 Give diagnosis of a pregnancy at the third month 4 Describe the mechanism of a podalic version and mention the points of danger to the fetus 5 Describe a complete abdominal hysterectomy 6 Describe some conditions of the uterus which may be relieved by an amputation of the cervix.

PRACTICE

1 Define (a) Tachycardia (b) leukemia, (c) cretinism, (d) hydrothorax (e) ascaris lumbricoides 2 Name symptoms of (a) Ulcer of stomach (b) acute nephritis (c) scarlatina. 3 What means would you employ in the diagnosis of diseases of the lungs stomach and kidney? 4 Name some of the sequelæ of typhoid fever Name some causes of intestinal obstruction 5 Give treatment of diabetes mellitus and of laryngeal diphtheria. 6 Give diagnosis and treatment of tetanus

CHEMISTRY

1 Define the terms Element compound mixture, and explain the use of the suffixes Ous, and ic. 2. State the chemical composition of atmospheric air What is the difference between expired and inspired air and explain how this is brought about? 3 State the properties of good drinking water What are its most dangerous impurities and why? and describe the methods in use for its purification 4 Give the chemical definition of a simple ether Give the chemical constitution and the physical and chemical properties of sulphuric ether Is this term a correct one and why? 5 What chemically are the vegetable alkaloids? State their general characteristics and give the effect of solvents on them and their salts 6. Suppose a specimen of urine of normal specific gravity and of either neutral or faintly acid reaction shows on boiling a precipitate. What substances may this indicate and how are they to be differentiated?

MATERIA MEDICA

1 Give the composition of compound cathartic pills black wash and Dover s powder 2. Give the official Latin title of paragoric name all its constituents and give the amount of the principal drug in one ounce of the mixture 3 What is the official name of calomel what drugs are incompatible with it and why? 4 Give the botanical name and official preparations of digitalis with dose of each 5 Name the official vegetable acids 6 Give the source of acetanilid caffein and salol

THERAPEUTICS

1 Give the general rule for calculating doses for children. 2 What are the modes of administration of medicines? How does dosage vary in each with that of the mouth? 3 What are the physiologic effects and medicinal uses of the preparations of belladonna? 4 Give the therapeutic uses of the iodids How are they best administered? 5 What are antipyretics? Describe general use of and how administered 6 Name the official digestive ferments give their physiologic action and therapeutic uses.

PHYSIOLOGY

1 Describe the circulation of the blood 2. What is coagulation of the blood? (a) Give some of the theories of coagulation and state how it may be hastened or retarded (b) What is intravascular clotting? How may it be caused and why does it not take place under ordinary circumstances? 3 What is meant by the heat regulating mechanism of the body? Explain the maintenance of a constant body temperature 4 Describe the physiologic function of the kidneys 5 Describe the mechanism of respiration both normal and forced. 6 Describe the phenomena and give some of the theories of sleep

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The General Medical Council of Great Britain Its Powers and Its Work.

In the *Lancet*, Oct 6 1906 Dr Donald MacAllister describes the functions of the General Medical Council of Great Britain The council he says is in fact neither a parliament for making professional laws nor a union for protecting professional interests When the council was created, nearly 50 years ago the declared purpose of the legislature was simply to conserve the interests of the public by enabling it to distinguish between qualified and unqualified practitioners The instrument which parliament set up for the purpose of marking this distinction is the "Medical Register" the keeping of which is entrusted to the council On the register are placed the names of those who have passed certain tests of professional fitness These are called registered practitioners and these alone the law declares to be duly or legally qualified Thus the two great functions which the council in the public interest discharges are first to prevent the unfit from gaining access to the register and second to remove the unworthy It is a council on education and a board of registration

Although it is a council on education it neither teaches nor examines It can not lay down a code or curriculum compulsory on all medical students Its statutory powers are strictly limited. It can order the visitation and inspection of the various examinations held by universities and corporations in the United Kingdom for the purpose of testing candidates for their respective medical degrees or diplomas It can require from these bodies information concerning the course of study and the age of candidates which they prescribe If from the inspection of the examinations or the information supplied as to the curricula the council comes to the conclusion that either are insufficient, it has no power to disallow them or to order that they shall be amended. It forwards its report to the body concerned, takes note of any observations the body may make thereon, and if it is still convinced that the training or the test is insufficient, it brings the question before the privy council.

In this and in other matters the council is in close administrative relation with the privy council, a government body If the medical council neglects its duty in anything, the privy council may formally direct that the duty shall be performed and in default may itself perform it The privy council has power to supplement as well as to supersede It can do what the medical council is unable to do If it sees fit it can declare that an insufficient diploma shall no longer be recognized as legally registrable, and, if circumstances alter, it can rehabilitate the diploma and make it valid again

Although its positive legal powers are thus limited, yet in practice they have proved to be more efficient than they seem in theory By a gradual process of evolution and the exercise of moral pressure they have come to be quite adequate for the purpose

The medical council is also a board of registration By successive judicial decisions it has been laid down that in its procedure the council, sitting as a tribunal, must as nearly as possible follow the forms and rules customary in other courts It has no authority to compel the attendance of witnesses, to administer oaths, or to call for the production of documents It has only one judgment to give when a charge is proved to its satisfaction, namely, guilty of infamous conduct in a professional respect, and only one sentence when judgment is given, namely, erasure from the register From this sentence and judgment, given after proper inquiry and without malice the High Court of Justice has pronounced that there is no appeal.

The council is a court of professional discipline Practices which 40 or 50 years ago were so common and so lightly regarded that they excited little notice and less reprehension but are now repugnant to the general sense of the profession are sternly repressed by the council. For instance, respecting the professional offense of "covering," the council sent out a warning notice All qualified practitioners were notified that the abuse of their qualifications whereby an unqualified person was enabled to treat patients as if he were qualified, under "cover" of his employer, was in its nature fraudulent and dangerous to the public, and that such an offense rendered them liable to be judged guilty of infamous conduct

More recently the practice of issuing objectionable advertisements or of employing or sanctioning the employment of canvassers with the object of procuring patients, was brought before the council in connection with particular flagrant cases Each case had to be dealt with on its own merits Sometimes the case was fought, in others the accused practitioner preferred to discontinue the practice complained of and submitted himself to the clemency of the council A warning notice was issued, pointing out the public detriment, and professional discredit attaching to unworthy methods of attracting practice. Notice was given that practitioners who employed them, or sanctioned their employment, were liable to the penalty of erasure from the register Thus it will be seen that even with its apparently limited powers as a court, and notwithstanding the apparent inadequacy of the statutes which govern it, the council does in fact formulate, and by formulation makes explicit, fresh applications of the law to the growing complexity of modern conditions

The constitution of the council has had much to do with the effectiveness of this body Each of 24 licensing bodies appoints a member of the medical council Five members are appointed directly by the sovereign, on the advice of the privy council, and five members more are appointed by direct election, under a universal suffrage, by the registered practitioners resident within the kingdom The total number of members is 34 Of these 14 only are required by law to be medical practitioners The sovereign and the universities may appoint laymen if they choose but they have not done so It was proposed at one time that the sovereign appoint lay members of the House of Lords, as being persons of knowledge and experience of public affairs who are independent of transitory politics, they would increase the administrative efficiency of the council, correct its tendency to professional bias, and be always at hand to bring forward in parliament measures of medical importance However, the constitution of the council makes it a most excellent council of medical education Its members are not delegates of constituent bodies and sections, but members of the council Each member represents the council in his own faculty, and not vice versa

From the point of view of the council as a corporate entity, it is also of inestimable advantage that each of its constituent bodies is represented on it Its members are so many envoys from the universities and corporations Each is in immediate touch with his governing body, he is by hypothesis in good standing and influence there, or he would not have been chosen While he is an envoy of the body, he becomes in turn an envoy of the council to the body From his own knowledge of the course of the discussion, the arguments used, the examples proposed for imitation he is in a position to explain and commend the council's decision to his colleagues at home He can make clear the scope and bearing of resolutions which are not always self explanatory

The preliminary education and registration of students is a matter of statute

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every day practice Proper inquiries concerning general formulæ and outlines of treatment are answered in these columns]

Laryngitis

In the treatment of acute laryngitis Grayson states that general measures are of value in combating the trouble, such as intestinal evacuation by means of small doses of calomel followed by a saline purge The patient's room should be moistened by the addition of steam If there be a rise in temperature a vascular depressant combined with a diaphoretic is recommended He advises for this purpose drop doses of the tincture of aconite given frequently The cough may be quieted and the secretion of the larynx increased by a combination similar to the following

℞	Morphinæ sulph		
	Antimonii, āā	gr 1/25	0024
	Ammon chloridi	gr ii	12
	Pulv ipecacuanhæ	gr ⅛	008

M Fiat capsula Sig One such capsule every four hours

The use of the voice must be absolutely prohibited and the diet restricted to the simplest foods

The local treatment, according to Grayson should consist of very mild and soothing applications such as Dobell s solution and a warm sedative inhalation given two or three times a day This may be prepared by adding a teaspoonful of the compound tincture of benzoin to a pint of hot water and inhaling the steam through a cone The water should not be boiling, according to Grayson, but is best prepared by adding one part of cool water—60 F—to two parts of boiling water If the cough is frequent and accompanied by much pain he recommends that one or two drops of chloroform or a teaspoonful of paregoric be added to the benzoin After two days of the foregoing treatment it is recommended that an astringent spray be employed For this purpose he advises the following combination

℞	Aluminis	gr x	05
	Aquæ	f℥i	30

M Sig To be sprayed into the larynx

Later in the course of the disease inhalations containing oleum eucalypti or oleum pini sylvestris may be employed

The following combinations are recommended by Hare in the treatment of acute laryngitis

℞	Menthol	gr iii	20
	Petrolati liq	f℥i	30

M Sig To be used as a spray, at the same time instructing the patient to inhale

A watery spray should never be employed in the treatment of the acute cases of laryngitis as it sometimes tends to aggravate the condition If the laryngeal irritation however, has been brought on by the inhalation of particles of dust, he recommends the following combination as a spray

℞	Sodii chloridi	gr xv	1
	Acidi borici	gr x	65
	Sodii boratis	gr x	65
	Aquæ rosæ	f℥iii	90

M Sig To be used as a spray

The external treatment in severe cases consists in the application of a mustard plaster or other forms of heat over the larynx, at the same time advising a hot mustard foot bath and a warm drink just previous to retiring

The internal treatment, according to the author, consists in obtaining proper elimination from the bowels by means of calomel, followed by a saline if constipation be present, and in the administration of full doses of aconite and sodium bromid as follows

℞	Tinct aconiti	m xii xxiv	75 1 65
	Sodii bromidi	ʒii	8
	Aquæ menth pip q s ad	f℥iii	90

M Sig One dessertspoonful every four hours Or

℞	Potass bromidi	ʒiv	15
	Tinct. aconiti	m xii	75

M. Fiat chartulæ No xii Sig One powder every four hours in water

The foregoing may be continued until convalescence occurs as it tends to soothe inflamed surfaces by allaying the arterial disturbance

In some cases he recommends the application of the tincture of iodin to the larynx and episternal notch In children this may be substituted by applying the following combination

℞	Olei succini (amber)	fʒiv	15
	Olei olivæ	fʒxii	45

M Fiat linimentum Sig Apply locally

The *Cyclopedia of Medicine* recommends the following combination internally in the treatment of acute laryngitis

℞	Tinct aconiti	m x	05
	Tinct belladonnæ	fʒss	2
	Glycerini	fʒii	8
	Sol. potass citratis q s ad	f℥ii	60

M Sig Two teaspoonfuls every three hours in water

Locally small pieces of ice may be dissolved in the mouth and cold applied externally For this purpose Leiter's coil is recommended As a sedative inhalation the following is advised

℞	Menthol	gr ii	12
	Spts chloroformi	fʒss	2
	Tinct benzoini co q s ad	f℥ii	60

M Sig Two teaspoonfuls to a pint of hot water and inhale every two hours

Acute laryngitis in children is best relieved by the administration of the syrup of ipecac dram ½ (2 00) every fifteen minutes until vomiting takes place and the throat may be swabbed with the glycerite of tannin

Some authors recommend a combination similar to the following

℞	Liq morph hydrochlor (1 p c.)		
	Vini antimonialis āā	fʒi	4
	Liq ammon acetatis	f℥i	30
	Aquæ camphoræ q s ad	f℥v	150

M Sig From a dessertspoonful to a tablespoonful every four hours

In children the following may be used

℞	Apomorphinæ hydrochlor	gr 1/3	002
	Acidi hydrochlor dil	m iii	18
	Syrupi senegæ	ʒv	18 5
	Aquæ q s ad	℥iss	45

M Sig One teaspoonful every hour

THE LARYNGITIS OF VOCALISTS

In cases of subacute laryngitis of vocalists Yeo recommends the following outline of treatment

1 An aperient

2 A laryngeal spray of a 1 per cent solution of cocain

3 The following combination as a lozenge

℞	Morphinæ sulph		
	Cocainæ hydrochlor āā	gr 1/150	0004
	Tinct aconiti	m 1/6	01
	Pulv altheæ rad	gr ss	03

M Fiat lozenge Sig One such lozenge to be taken into the mouth frequently

4 As a preparation for a vocal effort after the acute symptoms have subsided gr 1/60 (001) of strychnin after meals

SIMPLE CHRONIC LARYNGITIS

In cases of simple chronic laryngitis the following combination is recommended

℞	Eucalyptol	gr iii	20
	Spiritus camphoræ	fʒiv	15
	Tinct benzoini co q s ad	f℥ii	60

M Sig Two teaspoonfuls to a pint of hot water and inhaled at bedtime and on arising

After the morning inhalation it is recommended that the patient remain indoors for an hour or two Locally it is advised that silver nitrate be applied as follows

℞	Argenti nitratis	gr v x	30 65
	Aquæ	f℥ss	15

M Sig Apply locally to the enlarged follicles of the pharynx

As a lozenge to be dissolved in the mouth the following is recommended

℞	Pulv guaiaci	ʒii	8
	Olei caryophylli	m ii	12
	Olei limonis	m v	30
	Pulv acaciæ	ʒss	2
	Pulv sacchari	ʒi	4
	Confectio rosæ q s		

M Fiat lozenges No xxx Sig One lozenge to be dissolved in the mouth every four hours

As an inhalation or spray in chronic laryngitis Yeo recommends the following combination

℞	Acidi tannici	gr xv	1
	Spts vini rectif	fʒiiss	10
	Aquæ q s ad	℥ii	60

M Sig To be used locally as an inhalation or a spray

Or

℞	Olei pini sylvestris	ʒii m i	8 12
	Magnesiæ carb	ʒi iss	4 6
	Aquæ q s ad	℥iii	90

M Sig One teaspoonful to be added to a pint of water at 150 F and inhaled for five minutes two or three times a day

As a gargle for hoarseness from fatigue of the voice the following combination is advised

℞	Acidi tannici	ʒi	4
	Glyceriti boroglycerini	ʒii	8
	Tincturæ capsici	fʒiss	6
	Aquæ rosæ q s ad	f℥x	300

M Fiat gargar Sig To be used frequently as a gargle

Gonorrheal Rheumatism

W J Robinson in an abstract in *Merck's Archives* states that if after getting rid of the gonococcus there is evidence of involvement of the joints the following combination is recommended as a local application

℞	Acidi salicylici	ʒi	4
	Mentholis	gr xv	1
	Guaiacolis	ʒss	2
	Alcoholis	f℥i	30

M Sig To be painted over the affected areas with a camel's hair brush and the parts covered with cotton and oil silk

Or, as a liniment the following

℞	Methyl salicylatis	ʒii	8
	Guaiacolis	ʒi	4
	Olei veratrinæ		
	Linimenti camphoræ āā	fʒi	4
	Linimenti belladonnæ	f℥i	30

M Sig Rub in well and cover with cotton and oil silk or muslin

As an ointment the following composition

℞	Chloralis hydratis	ʒi	4
	Camphoræ		
	Mentholis āā	ʒss	2
	Acidi salicylici		
	Guaiacolis, āā	ʒi	4
	Atropinæ	gr ii	12
	Petrolati	℥i	30
	Lanolini q s ad	℥ii	60

M Sig Apply externally

Medicolegal

Liability of Charitable Hospital for Negligence—Failure of Hospital or Individual to Warn Nurse of Patient Having Contagious Disease—Duty as Employer

The Supreme Court of New Hampshire says, in Hewett vs Woman's Hospital Aid Association, that a charitable institution has certain duties to perform toward those with whom it is associated, which it can not violate with impunity, in the absence of some express exemption of a legislative character, is not debatable The sanctity of its general trust fund or property does not make that result necessary, or, on grounds of public policy, desirable The liability of charitable corporations in actions of tort (for wrongful act or negligence) is frequently enforced If the language of some courts is broad enough to deny the liability of charitable corporations in all actions of tort, it cannot be regarded as a discriminating statement of the law on the subject

The duties of the defendant to the plaintiff when she was employed to nurse a diphtheria patient had their inception in the contract of employment She was engaged to do a necessary part of the work of maintaining a hospital for the sick. For this labor she was paid If she was an apprentice receiving small remuneration in money, in consideration of the instruction and experience she received in practical nursing, she was none the less an employé of the defendant An apprentice learning a trade occupies the position of a servant with reference to his employer, and obviously the latter's duty to inform him of the dangers of his occupation is greater than in the case of an experienced workman While performing the necessary work of nursing in the institution, the plaintiff was not, like a patient, the recipient of the defendant's charity She was doing the defendant's proper work, under its direction, and for its benefit in the discharge of its assumed duties She was as much an employé of the hospital in respect to this particular work as she would have been if she had been a graduate nurse receiving full nurse's pay The fact that, at the time she was employed, she represented herself to be older that she was did not relieve the defendant of its ordinary duty to her as its servant Her apparent youthfulness, general intelligence, and practical experience in nursing were facts for the consideration of the jury on the question of the degree of care the defendant was bound to exercise

If the plaintiff had been employed by an individual to attend a member of his family afflicted with smallpox, of which he had knowledge, but of which he did not inform her, and she took the disease without fault on her part, and suffered damage therefrom, it would not be seriously denied that he was guilty of actionable negligence in not informing her of the danger to which he exposed her It was his duty arising from his employment of her, or from the contractual relation of master and servant existing between them, to warn her of the danger incident to the service which he knew, or under the circumstances ought to have known, and of which he knew she was ignorant, though in the exercise of ordinary care And this duty is a nondelegable one To say that a similar duty was not imposed on the defendant for the benefit and protection of the plaintiff, because it is a charitable corporation, is to relieve such corporations from the reasonable obligation of exercising the care ordinarily required of, or contractually assumed by, men in general in the prosecution of their legitimate business The necessity for such an exceptional holding is not apparent Since the property of the defendant is held for the general purpose of maintaining a hospital, without other specific limitation, it is no more exempt from being appropriated to the payment of damages occasioned by the negligence of the hospital than is the property of an individual, which he holds for commercial or charitable purposes, for the consequences of his negligence

In conducting the affairs of a hospital, its officers and agents are as liable to commit acts of negligence as are the officers and agents of a railroad or other business corporation. Men in general are not uniformly careful Experience shows that negligence—the failure to exercise ordinary care—is to be expected when men engage in industrial pursuits It may, not inappropriately, be said to be necessarily incidental in the accomplishment of most practical results through the agency of man The donors of the defendant's property for hospital purposes were not ignorant of this fact, and are presumed to have given the trust property knowing that it might be required for the liquidation of claims in tort, as well as for claims in contract, incurred in carrying out the purposes of the corporation Indeed, its conceded authority to contract for the employment of nurses and other necessary agents would seem to include power to respond in damages for all breaches of such contracts, one essential or incidental element of which is its duty to exercise care as well as its duty to pay stipulated compensation No conditions were imposed on the defendant, either by its charter or by the donors of its property, by which the contracts of employment it was obliged to make with its servants should have a different effect from that usually given to such contracts, or that the relations between it and its employés should be *legally different from those usually subsisting between* master and servant There is, therefore, no substantial reason for holding that it did not owe the duty to the plaintiff of warning her of the dangers of her employment, under the law as applied to the ordinary relation of master and servant

The evidence tended to show that one of the patients whom the plaintiff nursed had a form of diphtheria, that a culture taken from this patient and examined by a bacteriologist contained diphtheria bacilli, and that the physician in charge of the patient, and who was also the manager of the hospital, was duly informed of the result of the examination If the jury found these facts to be true, they were warranted in the conclusion that the hospital had notice of the contagious character of the patient's disease, and that it was its duty, acting as ordinarily prudent men would have acted under the same circumstances, to disclose the danger to the nurse, who was ignorant of its existence The court can not say that a reasonable doubt in the mind of the physician, in her diagnosis of the patient's disease, as to its true character, would justify her who, as the representative of the hospital, was bound to exercise reasonable care for the plaintiff's safety, in omitting to inform her that the disease might be of a diphtheritic character The hospital might be bound to warn her before the physician had reached a satisfactory diagnosis

Liability for Performance of Unauthorized Operation

The Supreme Court of Minnesota rendered a decision last year in the malpractice case of Mohr vs. Williams which was reported at considerable length in the Medicolegal Department, on page 573, of THE JOURNAL of August 19, 1905 It was then held, among other things, that, in the absence of consent, express or implied, the defendant had no authority to perform an operation on the plaintiff's left ear, and that, if the operation was performed without either express or implied authority, it was wrongfully and unlawfully done and in law constituted assault and battery, in which case the amount of recoverable damages would depend on the character and extent of the injury inflicted, considering the nature of the malady intended to be cured, the beneficial nature of the operation and the good faith of the defendant A verdict for $14 322 50 was obtained, but, on the ground that this was excessive, the Supreme Court granted a new trial

This new trial resulted in a verdict for the plaintiff for $3,500, but the trial court granted a motion for judgment in the defendant's favor, notwithstanding the verdict, apparently on the ground that the evidence conclusively proved that an emergency existed which called for immediate treatment, and that the operation was justified on that ground conceding no consent had been given, either expressly or by implication But the Supreme Court, on the case being again appealed to it, holds that it was error to order judgment for the defendant notwithstanding the verdict, as the evidence did not conclusively show that the defendant, an ear specialist, had authority, express or implied, to operate on the left ear of his patient, and that no damage resulted At the same time, it is of opinion that the defendant should have an opportunity to have the trial court pass on a motion he made for a new trial on the ground that the verdict was excessive etc

Furthermore, on this second appeal to it, the Supreme Court says that from an examination of the record it is again of opinion that the evidence did not conclusively establish the fact that the left ear was in such serious condition as to call for an immediate operation. If the patient placed herself in the defendant's care for general ear treatment, why did he not in the first instance make a thorough examination of the left as well as the right, ear? was a pertinent inquiry He testified that he found an obstruction in the left ear which in itself was unnatural, and yet he did nothing to ascertain the real condition for nearly three weeks thereafter If the critical condition discovered at the time of the operation was such as to be reasonably anticipated, then the long delay without attention or treatment was not readily explained, and was suggestive of inattention and negligence, and had some bearing on the subsequent conduct of the defendant and his explanation of what occurred

The physician referred to in the first report as being present when the operation of ossiculectomy on the left ear was performed, and designated as the plaintiff's family physician, the Supreme Court now says the record disclosed was not her physician, but had treated her sister, and was asked to be present at the operation simply to guard against the effects of the anesthetic. There was no evidence in the record to justify the conclusion that he had any authority to consult with the defendant and speak for the patient as to what might be necessary to do But the court does not mean by this that the fact that he was consulted and expressed an opinion might not be given weight in determining the real condition of the left ear, and the good faith of the defendant in operating

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Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York.

October 27

1 *Hospital Reform in a New Light H S Stark New York
2 Choice of Cow's Milk J A Gilbert, Portland Ore
3 *Remarks on Cesarean Section P F Martin Indianapolis
4 *Joint Affections of Hemophilia J G Sheldon Kansas City Mo
5 *Mortality from Lobar Pneumonia in High Altitudes. I W Brewer U S Army

1 **Hospital Reform in a New Light.**—Stark states that the treatment of the sick poor alone should not claim the attention of hospitals supported by the city or state These institutions should become centers for the medical education of the masses Here the people ought to be able to receive instruction in rules which govern health and prevent disease Provision should be made for delivering lectures during the winter months If this work were taken up, the house staffs of the hospitals should be increased, the staff of visiting physicians might well be augmented also The medical and surgical work in the hospitals should not be centralized in the hands of a few Stark suggests that members of a staff who have served continuously in one capacity for a specified number of years be retired from active practice

3 **Case of Cesarean Section.**—Martin describes a case of eclampsia occurring in a patient with a markedly contracted pelvis In this eclamptic attack there was absence of the usual accompanying renal elements There was no evidence of organic lesion other than increased tension of the pulse with accentuated second aortic sound a low excretion of urea and a slight rise of temperature The pelvic and fetal measurements were such that a natural termination of labor was impossible The mother and child are both in good health

4 **Joint Affections of Hemophilia**—Sheldon says that the importance of diagnosing these joint affections can not be overestimated König has divided the symptoms of these cases into three stages 1 Those in which intra articular hemorrhage is the only change, 2 after repeated hemorrhages have resulted in marked articular and periarticular changes, and have limit[illegible] motion [illegible] when [illegible] resulted in [illegible] he [illegible] portr[illegible]t. In [illegible] atta

history of a slight injury, suddenly becomes painful, swollen, hyperemic and tender There is extreme pain, but not marked tenderness There is evidence of fluid in the joint cavity As a rule there is a rise of temperature The symptoms subside in about a week, only to recur again. The joint should be aspirated by a small needle Nothing can be done for the old cases

5 **Mortality from Lobar Pneumonia in High Altitudes**—Brewer presents a summary of the statistics obtained at three military hospitals in Arizona and New Mexico Fort Huachuca is situated in the southeastern part of Arizona, at an elevation of 5,042 feet above the sea Its annual mean temperature is 60 degrees Fort Grant is about 60 miles north, with practically the same climate Fort Wingate is in the western part of New Mexico, at an elevation of 6,822 feet. The mean annual temperature is 61 degrees The records cover the period from 1884 to 1904 In all there were 61 cases of lobar pneumonia treated, with a mortality of 18 per cent, while for the army at large for the same period the mortality was 17 4 per cent These statistics seem to show that elevation has little to do with the mortality from lobar pneumonia Comparing the stations themselves, the mortality is found to vary inversely with the altitude.

New York Medical Journal.
October 27

6 *Indications for Surgical Intervention in Diseases of the Stomach J A Blake New York
7 *Sclerosis of the Coronary Arteries H Brooks New York
8 American Aborigines from a Hygienic Standpoint. A. L. Benedict Buffalo
9 *Present Treatment of Diphtheria by the Medical Profession. W S Cornell Philadelphia.
11 Mandragora An Historical Sketch A. R Kennedy, Phila of Tuberculosis S G Bonney Denver, Colo
11 Mandragora, An Historical Sketch A. R. Kennedy, Philadelphia
12 Comparison of Results in Blood Counting Between the Einhorn Laporte and Thoma Zeiss Methods E. V Murphy, Newport, R. I and G T Strodl New York
13 Typical Case of Tabes Dorsalis in a Negress W G Bowers Philadelphia

6 **Surgical Intervention in Diseases of Stomach.**—Blake, in reviewing the indications for surgical intervention in diseases of the stomach, says that it is a mistake, at least in the present status of gastric surgery, to consider surgery a cure all in diseases of the stomach In fact, he continues, gastric surgery is more likely to be hindered than advanced by an improper selection of cases through a mistaken idea or comprehension of its possibilities He believes that operation should not be refused in any case where there is a chance for benefit, particularly when drainage of the stomach is interfered with. The main, although not the only, indication for surgical interference in diseases of the stomach is evidence that it is improperly performing its motor functions, that is emptying itself

7 **Sclerosis of Coronary Arteries**—Brooks found coronary disease present in such a degree as seriously to affect the nutrition of the heart muscle and nerves in 270 out of 1,000 consecutive autopsies Of the cases in this series which showed arterial disease, 195 of the 250 males showed thickening of the coronaries, while of the 126 women, 75 showed the same change One of the patients was a boy 15 years old. Senility *per se*, was concerned in the etiology of the 270 cases but 16 times The average age of the patients was about 45 years The history of the abuse of alcohol was obtained in 107 cases Nephritis was present in 35 cases, syphilis in 30 cases tuberculosis in 20 cases, cancer in 4, diabetes in 6, and rheumatism and myelitis 3 times each Of those conditions aside from nephritis which cause hyperarterial tension Graves' disease appeared twice, acromegalia seven times plumbism twice and the excessive use of tobacco nine times Obesity was a factor in four instances

Brooks found that the most frequent type of coronary sclerosis is an endarteritis in which proliferative changes take place in the sub endothelial layer of the intima True acute arteritis is rare in the coronary arteries Certain cases of coronary disease appear to show primarily pathologic changes of the adventitia in greatest degree Of Brooks' 270 cases all but 15 showed lesions of the myocardium apparent to the unaided eye Two hundred and fifteen cases presented changes in the heart muscle of sufficiently severe disease to be noted as contributory to the cause of death The most frequent lesion presented was fatty heart Atrophy of the heart was found in 64 instances, fibrosis of the myocardium in 24 instances, well marked cardiac hypertrophy in 35 instances, and acute dilatation in 20 instances Aneurism and cardiac rupture were found as direct results of disease in the coronary vessels in two instances each Brooks is convinced that in many cases diagnosticated as pseudo angina pectoris are in reality coronary sclerosis in which the spasmodic contractions of the vessels is less marked than in manifest angina pectoris In 152 cases in which a diagnosis of arteriosclerosis of the peripheral arteries was made, the coronary arteries were found seriously diseased 116 times After considerable experience Brooks thinks he is justified in assuming that the presence of coronary sclerosis of a greater or less degree in many cases in which the blood pressure is above 180 mm, and particularly in those in which otherwise unexplained paroxysmal increase in the blood pressure is found, especially when intervening periods of low blood pressure are demonstrable

The treatment is hygienic, eliminative and symptomatic. Of the drugs commonly used Brooks prefers potassium iodid, in from 5 to 15 grain doses three times daily, strontium bromid, in from 7 to 14 grain doses once or twice daily, chloral hydrate, morphin, amyl nitrate, nitroglycerin, digitalis, strophanthus, and ergot The indications for each are discussed in full

9 **Treatment of Diphtheria**—Cornell analyses the treatment employed in 616 cases of diphtheria as reported to the Philadelphia bureau of health. Of this number 458 cases were treated with antitoxin Cornell commends this treatment

10 **Advanced Tuberculosis**—Bonney reports 10 cases in justification of the belief that a permanent arrest of the tuberculous infections is sometimes possible, even in those cases which may be regarded at first as utterly hopeless No special methods of treatment were employed other than those familiar to every physician of experience in the management of pulmonary tuberculosis

Boston Medical and Surgical Journal.
October 25

14 Classical Symptoms of Hysteria P Janet, Paris
15 Epidemic Cerebrospinal Meningitis A study of Its Etiology Diagnosis and Epidemiology Based Chiefly on the Cases Occurring in Worcester Mass. E. L. Hunt, Worcester Mass.
16 Routine Treatment of Syphilis with Intramuscular Injections of Mercury Salicylate W H Palmer Providence R. I
17 *External Eye Inflammations of Doubtful Origin H G Langworthy Dubuque Ia.

17 **Inflammation of Eye**—Langworthy reports two cases one a bilateral orbital cellulitis and exophthalmus of obscure origin, simulating a cavernous sinus thrombosis and double frontal involvement It is presumed that the infecting organism was the pneumococcus The other case was one of acute bilateral edema of the eyelids of unknown etiology The case seemed to be one of angioneurotic edema or a double frontal sinusitis

St Louis Medical Review
October 20

18 Realdus Columbus of Cremona L C Boislinlere St Louis

Lancet-Clinic, Cincinnati
October 27

19 Vaginal Tampon Some Points of Practical Interest. C T Souther Cincinnati
20 Intracranial Cephalhematoma F S M Kee Cincinnati

The Ophthalmic Record, Chicago
September

21 Septic Infection Following Ophthalmia Neonatorum S Stephenson London England
22 *Fergus Operation for Ptosis H W Woodruff Joliet Ill
23 Case of Hypermetropia of 21 Diopters Simulating Myopia. F Stieren Pittsburg Pa
24 *Another Successful Magnet Operation but with an Unusual Termination H B Young Burlington Ia
25 Epithelioma of the Orbit R H Johnston Baltimore
26 Dislocation of Lachrymal Gland T W Crowder Sherman Texas
27 Recent Advances in Ophthalmologic Therapeutics W B Marple New York
28 *Pseudo-Optic Neuritis T Faith Chicago
29 New Integral or Fused Bifocal Lenses H V Würdemann Milwaukee
30 Papilloma of the Plica Semilunaris R H Johnston Baltimore

22 Fergus Operation for Ptosis.—Woodruff has performed this operation three times with most excellent results There are no visible scars and the operation is more easily performed It is really an advancement operation, the only external excision being in the brow

24 Magnet Operation.—In the case reported by Young a scale of iron was removed from the eye with the giant magnet One week after the operation the patient, a man, became violent He died on the sixth day of his frenzy without having regained consciousness, death apparently being due to exhaustion, for neither pulse, temperature, nor any other symptom was characteristic of the structural lesion The postmortem findings were negative

28 Pseudo-Optic Neuritis.—Faith reports one case and concludes that the diagnosis may be settled on the following points 1 The absence of changes in the retina surrounding the papilla, together with normal visual fields 2 The absence of variations in the appearance of the disk or retinal vessels from time to time 3 The absence of decreasing changes in the central visual acuity from time to time

The American Journal of the Medical Sciences, Philadelphia.

October

31 *Experience with the Simpler Methods of Psychotherapy and Reëducation L F Barker Baltimore
32 *Value of a Study of the Apical Outline in the Diagnosis of Incipient Pulmonary Tuberculosis. C L. Minor, Asheville, N C
33 *Roentgen Rays in the Early Diagnosis of Pulmonary Tuberculosis W Lehman and W C Voorsanger San Francisco
34 Hematologic Studies in Tuberculosis. A. C Klebs, Dunning Ills. and H Klebs, Chicago
35 *Further Notes on the Serum Diagnosis of Tuberculosis. H M Kinghorn and D C Twitchell Saranac Lake N Y
36 *Clinical Anatomic and Pathologic Comparison of Tuberculous Cavities in the Lungs H R. M Landis Philadelphia
37 Statistics of Diet in Sanatoria for Consumptives. I Fisher New Haven
38 *Relative Value of the Home Treatment of Tuberculosis. L. F Flick Philadelphia.
39 *Etiology Prognosis* and Indications for the Surgical Treatment of Tuberculous Peritonitis. R Douglas Nashville Tenn
40 *Protection of Infants and Young Children from Tuberculous Infection J L. Morse Boston
41 Tuberculosis Among the Negroes T J Jones Hampton Va
42 *Tuberculosis Among the Oglala Sioux Indians J R Walter Pine Ridge S D
43 *Organic Heart Diseases and Immunity from Pulmonary Tuberculosis B Stow New York City

31 Psychotherapy and Re education.—Since Oct 1, 1905, Barker has had a large number of cases—more than 80—in which psychotherapeutic measures were the mainstay He reports and summarizes 15 cases as follows 1 Hysterical attacks, headaches, fainting spells with rigidity, no attacks after one week of treatment. 2 Aerophagia, chronic constipation, hot flushes, symptoms disappeared after two weeks of treatment, discharged at the end of one month apparently well. 3 Hysterical crises, choreiform movements, hemianesthesia, tremor, rapid improvement 4 Hysterical crises globus, dermatographia, contracted visual fields, rapid improvement 5 Hysteroneurasthenia, pathologic character, extreme fatigability and irritability, multiple painful sensations, tremor of eyelids, morbid fears, resistance to treatment for several weeks, then rapid improvement, gain of 36 pounds in weight. 6 Neurasthenia, fatigability, incapacity for work, cure 7 Fixed ideas of unworthiness and impossibility of happiness, despondency, fear of insanity, cure 8 Hysterical crises, cephalalgias, blepharospasm, rapid improvement 9 Neurasthenia of two years' duration hypochondriasis, thoracic pain and oppression, fear of aortic aneurism, rapid cure 10 Severe cephalalgias of many years' duration, emaciation, nervousness, rapid cure, gain of 30 pounds in weight 11 Nervous gastropathy of five years' duration, recent exacerbation fear of gastric ulcer, came to hospital for surgical operation, headaches, vasomotor disturbances, rapid cure gain of 12 pounds in weight 12 Insomnia, incapacity for work, fear of insanity, obesity, rapid cure, weight reduced 12 pounds 13 Enteroneurosis, mucous colitis, nervous incontinence of feces, vasomotor disturbances, rapid improvement, gain of 12 pounds in weight. 14 Neurasthenia hemorrhoids anemia, nicotinism, nervous dyspepsia and diarrhea fatigability, despondency, rapid cure 15 Nervous gastropathy, epigastralgia, nausea, belching, fear of gastric ulcer, rapid cure Barker says that the psychotherapeutist should be an honest man and an expert clinician He should recognize the horrible reality of the misery of the psychoneurotics He may be more successful in understanding and treating his patients if *he has had, himself, at least some little experience with the* fatigues and fears of neurasthenia, provided he has made a good recovery He must be interested in functional disturbances and not simply in anatomic lesions, and he must understand that hysteria and psychasthenia are as much diseases as are pneumonia or gonorrhea, and often incapacitate the sufferer *for a much longer period of time* *He should be skilled* in all the modern refinements of diagnosis, and should exhaust them in the study of his case before beginning his treatment

32 Apical Outline in Diagnosis of Incipient Pulmonary Tuberculosis—Minor presents his impressions of the diagnostic value of outlining the apices of the lung in pulmonary tuberculosis, based on the marking of such outlines for the past six or more years in all his cases He found that in early tuberculosis, especially of the apex, but also of lower portions of the lung, careful percussion will very generally demonstrate a dislocation of the inner line outward, and that the inner line, both anteriorly and posteriorly, is likely to be the earliest affected The posterior inner line changes chiefly or only in its upper two thirds The dislocation inward of the outer border generally occurs later, and a change of both inner and outer lines is naturally less common than of the inner or outer alone In early cases the lines do not approximate at the top, but join their fellows from the rear, in old cases with marked fibroid shrinkage they often run together to an apex before they reach the border of the trapezius Minor found the diagnostic value of these outlines in earlier cases, and to some extent their prognostic value later, to be considerable, not, of course, when taken alone, but in combination with other things A slight inward alteration of a border anteriorly and posteriorly carefully verified, will raise to a far higher value ambiguous auscultatory signs Outward dislocation is neither so early nor quite so easy to determine, but if certainly demonstrated has equal value

33 Röntgen Rays in Early Diagnosis of Pulmonary Tuberculosis—*Lehmann and Voorsanger* plead for the use of the *x* ray as a means of diagnosis in pulmonary tuberculosis Williams' diaphragmatic sign, the finding of more or less centrally located affections, haziness of the apex or of the whole lung, which anatomically corresponds to thickening of lung tissue, and proof of the existence of peribronchial enlarged glands, are four important points in beginning tuberculosis, often escaping clinical detection, and, if discovered by the *x* rays, speak almost conclusively for a beginning process in the lungs They present brief notes of a series of cases selected from a varied material, which show that the clinical and the *x* ray findings have agreed in the main, but that in the majority of the cases the *x* rays afforded valuable information as to the extent of the lesions which were often more widespread than the ordinary clinical evidences seemed to suggest. When the diagnosis was in doubt, on account of absence or insufficiency of clinical signs, the *x* rays showed a peribronchial or bronchial gland affection, the value of which in prognosis, as well as in diagnosis, is *of enormous importance* In a few cases, involvement of an apex evident clinically was not recognizable by the *x* rays, because recent infiltration, though sometimes sufficient to cause clinical signs, may not be sufficiently dense to produce a shadow or haziness on the *x* ray plate or screen

35 Diagnosis of Tuberculosis—In the tests *performed by* Kinghorn and Twitchell, clear, fresh human serum was used and was obtained either from the lobe of the ear or from a vein in the arm When agglutination took place in a dilution of 1 to 5 the reaction was considered positive The time limit given to the test was five hours, not more The tests were made at room temperature Agglutination was observed by the naked eye up to five hours Results were considered positive only in those tubes which showed well marked flocculi easily visible to the naked eye and with subsequent sedimen tation and clearing The total number of patients tested was 247 Of these 70 were persons in apparently good health, 155 were patients with pulmonary tuberculosis, 22 were patients with doubtful tuberculosis or with other diseases Of the 247 patients 212 reacted positively (85 82 per cent), 35 failed to react (14 18 per cent) Of the 70 healthy persons 59 reacted positively (84 28 per cent), 11 failed to react (15 72 per cent) Of the 155 patients with pulmonary tuberculosis 135 reacted positively (87 09 per cent), 20 failed to react (12 91 per cent) Of the 22 patients with suspicious signs of tuberculosis and with other diseases 18 reacted positively, 4 failed From these investigations Kinghorn and Twitchell conclude that the serum diagnosis of tuberculosis as used by Arloing and Courmont is not a specific sign of the presence of clinical tuberculosis, since healthy and tuberculous serums have practically the same agglutinating property, and that the serum diagnosis of tuberculosis, and especially for the early diagnosis of tuberculosis, is of no value.

36 **Tuberculous Cavities in the Lungs**—In comparing the clinical with the pathologic findings in 50 cases Landis found that of the 76 cavities present 58 had been recognized, while 18 had escaped notice The majority of the cavities not recognized were very small, three of them, however, had attained the size of a lemon In the 58 cavities which were correctly diagnosed, lack of expansion, retraction of the apex, and flattening of the chest wall anteriorly were the rule Bulging or fulness of the chest wall over the site of the cavity was not met, in those cases in which it could not be elicited the tactile fremitus was exaggerated in 34 instances and diminished in 13 The percussion note had a tympanitic quality in 36 was dull in 16, hyper resonant in 3, and in 3 instances was of the cracked pot variety of tympany The breath sounds were noted as cavernous in 29, amphoric in 19, bronchial in 13, and distant and indefinite in 7 There was an absence of râles in 9 When present they were noted as being fine and moist in 16, consonating in 17, and gurgling in 16 Vocal resonance was exaggerated in 51 instances, and diminished in but 1 Whispering pectoriloquy was present in 53 instances and absent in 5

In 8 instances cavities were correctly diagnosed as being communicating, this was about one fourth of those actually of that character The diagnosis was based on the breath and voice sounds having several points of maximum intensity, in conjunction with a large area of coarse bubbling râles with a metallic quality, and symptoms indicating a rapid destruction of tissue The physical signs over those cavities (18) which were not recognized were almost invariably dulness, bronchial breathing increase in vocal and tactile fremitus and absence of whispering pectoriloquy Most of these cavities were found postmortem to contain thick, creamy pus In the 10 instances in which cavities were believed to be present, but which at postmortem were not found, consolidated tissue around a bronchus was the source of error in 5 In one case there was no adequate explanation In 4 cases the error was probably due to transmission of the amphoric breathing and whispering pectoriloquy from a cavity on the opposite side In these 4 instances the supposed cavities gave signs posteriorly only Cavities, as a rule, *give more marked signs* anteriorly Thus, of the 58 under consideration, the signs were present anteriorly, or anteriorly and posteriorly in 55 instances, while but 3 gave signs posteriorly alone From this analysis it is evident that any one of the above signs is suggestive of a cavity and that the probability of its existence is increased by the combination of any two or more of them

38 **Home Treatment of Tuberculosis.**—Flick believes that the treatment of tuberculosis can be better carried on at present in the home of the patient in those places at least where expert services can be given than in a health resort For people living in places where expert services can not be had it is undoubtedly better to go to a health resort than to remain at home

40 **Tuberculous Infection in Children**—Morse states that the separation of children from tuberculous adults is the most simple and rational method of protecting them against contagion Such separation however, is often impossible The only practicable method then is the observation in the best way possible in the individual case of the principles of hygiene and habitation When a family is in reduced circumstances the public must step in and help What can be done as to the separation of the children from the patients and as to sanitation depends in each case on the circumstances of the family and the provisions for the care of the tuberculous made by the public. That is to say, protection against tuberculosis is largely a question of money

42 **Tuberculosis Among Indians**—According to Walker, tuberculosis among the Indians does not differ in any respect from tuberculosis among white people. The infecting material is the same, and is produced and disseminated in the same way, individuals are infected in the same manner, and the disease runs the same course, produces the same results, and is subject to the same measures, remedial or preventive, as among white people It does not show any especial affinity for the Indian, nor affect him under any condition in which it would not affect a white man There is no inherent peculiarity of the Indian which renders him more liable to infection with tuberculosis than a white man under like circumstances Walker thinks that a practical method for suppressing tuberculosis among the Indians would be by the establishment of a sanitary camp, where all that are infected with the disease should be collected and maintained, under competent supervision, until each case terminates

43 **Heart Disease and Immunity from Pulmonary Tuberculosis.**—The object of Stow's paper is to show that those organic heart lesions accompanied by well marked pulmonary stasis, thus concentrating in the lungs the immunizing agents of the blood, *whatever they may be, are rarely followed by* phthisis pulmonalis, or if this previously existed, they exert a salutary effect on it, and the reverse conditions frequently are followed by pulmonary tuberculosis

Buffalo Medical Journal

October

44 *The Use of Local Anesthetics in Operations on the Chest and Abdomen. M Clinton Buffalo
45 Management of Pulmonary Tuberculosis J C Young, Cuba N Y
46 *Vaginal Cesarean Section in the Treatment of Puerperal Convulsions. H E Hayd Buffalo
47 Eyestrain and Crime. G M Gould, Philadelphia.

44 **Local Anesthesia.**—Clinton is of the opinion that certain cases of profound sepsis, notably empyema and local abscess of the abdomen, are more safely attacked under local anesthesia In order to satisfy his own mind as to the relative importance of the solution used, or the manner of using it, he had a patient prepared for a double herniotomy With a large syringe and a small needle the skin was infiltrated with plain sterile warm water Next the fatty tissue was blown up, and then an incision was carried to the external oblique The patient did not feel any pain By ballooning up each layer of muscle and fascia with warm water, and massaging it before it was cut it was found that anesthesia was as complete as if a strong cocain solution had been used.

46 **Vaginal Cesarean Section**—Hayd reports the case of a primipara, aged 23, which he believes demonstrates clearly the wisdom of emptying the uterus as quickly as possible in a bad case of convulsions, and the ease and facility with which the delivery can be accomplished by employing the anterior cervical incision of Dührssen

Journal of the Michigan State Medical Society, Detroit

October

48 *Possibilities and Limitations of Laboratory Diagnosis J Sill Detroit
49 *Physical Disturbances in Distant Parts of the Body Due to Eye-Strain. J G Huizinga Grand Rapids
50 *Treatment of Ununited and Compound Fractures with Bone Pins A I Lawbaugh Calumet
51 *Treatment of Fractured Patella. C S Oakman Detroit.
52 Observations on Rheumatism and its Treatment. with the Mineral Baths of Mt Clemens R Leuschner Mt Clemens

48 **Laboratory Diagnosis**—Sill believes that the laboratory can give to the clinician many aids in making his diagnosis Examinations of the urine blood or other fluids, secretions and excretions of the body frequently will swing the weight of the evidence from one side of the balance to the other and determine a doubtful diagnosis Frequently after a diagnosis is

made exact information gained from the laboratory will be of great value for prognosis or will suggest important modifications of treatment The laboratory can not, except in a few instances, make diagnoses for the clinician The more complete is the coöperation between the clinician and the laboratory man, the more information can the worker in the laboratory give the practicing physician, and with increasing opportunity to correlate laboratory findings with clinical conditions will come an increasing ability to determine the significance of pathologic changes in a given case

49 Effects of Eyestrain.—Huizinga reports three cases in which eyestrain caused functional disturbances, but he calls attention to the fact that while eyestrain is a very important factor in the etiology of the vast majority of these disturbances, it is generally only one of several factors, each one of which must receive recognition Although many of these disturbances can not be relieved without relieving the attending eyestrain, it is equally true that the vast majority of patients also require other treatment in addition to glasses in order to obtain permanent results He does not think that glasses should receive all the credit for the results obtained.

50 Bone Pins in Ununited Fractures —Lawbaugh uses ivory nails or pins for the purpose of fixation in both compound and ununited fractures whenever such a method is indicated Two pins are used, unless the bone is small, as in the case of the radius or ulna, and even then two small pins are preferable to a single large one. The pins are placed at an angle with one another so as to brace the fragments To give additional firmness to the parts, he also places a strong piece of kangaroo tendon around the fragment This is absorbed, as are the pins, and causes no irritation He urges the use of bone pins for the following reasons 1 The parts are held more firmly than by any other method 2 The ivory pins can be thoroughly sterilized, and are applied with as great or even greater ease than any other material 3 They cause no irritation and are completely absorbed.

51 Treatment of Fractured Patella.—Oakman declares that operation should never be considered under any but ideal conditions, nor in sick or aged patients In operating in recent cases, absorbable sutures should be applied to the soft parts For fixation the wire splint should be used first and then plaster of Paris As soon as the plaster splint is applied the patient should begin to use crutches

New Orleans Medical and Surgical Journal.
October

53 Confusion Between the Terms Contagion and Infection or the Mosquito Craze C Faget, New Orleans
54 Statistics of Pulmonary Tuberculosis in the Registration Area of the United States for the Fifteen Years from 1890 to 1894 Based on the Returns of the United States Census Bureau. I W Brewer Ft. Huachuca Ariz
55 Isolation Hospitals H P Jones New Orleans
56 How the Yellow Fever Situation was Handled in Kenner in 1905 S D Gustine Kenner La
57 An Epidemic History with Kindred Remarks F R Bernard Lake Providence La.
58 Dengue and Yellow Fever G F Patton New Orleans
59 Early Diagnosis and Treatment of Phthisis Pulmonalis L Sexton New Orleans
60 *Two Cases of Gonorrheal Arthritis. Treated by Bier Hyperemia. C W Allen Crowley La

60 Gonorrheal Arthritis —Allen reports two cases of gonorrheal arthritis that were treated successfully by means of the Bier hyperemia method The bandage usually was applied at noon just above the knee, and frequently was left on all night The treatment was continued about 14 days in one case and about 10 days in the other In the second case the wrist joint was affected

Bulletin of the American Academy of Medicine, Easton, Pa
October

61* How May the Medical and Teaching Profession Coöperate to Improve the Moral Mental and Physical Condition of the Young S A. Knopf New York.
62 *Duty of the Family Physician in Regard to the Proper Mental and Physical Development of the Children under his Care from Infancy to Adolescence. D A Sargent Cambridge, Mass
63 *Training of the Mentally and Morally Defective Child M P Groszmann Plainfield N J
64 *Sanitary Regulation of the School Room with Reference to Vision C A. Wood, Chicago
65 *Coeducation G S Hall Worcester Mass
66 *Advantages or Disadvantages of Coeducation W T Smith Hanover N H
67 *Dangerous Influences of Overtaxing the Girl's Mind Particularly at the age of Puberty A. P Clarke, Cambridge Mass
68 *Id. L. L. Bulkley, New York.

61, 62 —See The Journal, July 28, 1906, page 301

63 to 68 —See The Journal, Aug 4, 1906, page 383

Ohio State Medical Journal, Columbus
October 15

69 Cancer of the Uterus. J F Baldwin Columbus
70 Cancer of Cervix Choice of Operation. M A. Tate Cincinnati
71 Plan of Excision in Cancer of the Head and Neck and an Analysis of 132 Cases G W Crile Cleveland.
72 Problem in the Etiology of Esophageal Carcinoma N W Brown Toledo
73 Lymphatics of Malignancy S D Foster Toledo
74 *Physiologic and Pathologic Effects of Alcohol and other Narcotics* S J Hatfield Indianapolis, Ind

Iowa Medical Journal, Des Moines.
October 15

75 Gastric Neuroses F J Murphy Sioux City
76 Infection and Immunity R H Parker Storm Lake
77 Chairman's Address Section of Materia Medica, Iowa State Medical Society W C. Post Maquoketa.
78 Accuracy in Therapeutics. W F Waugh Chicago
79 Therapeutic Accuracy A. L. Belt, Gilmore City
80 Some Thoughts on Autotoxemia. D E. Fisher Rodney
81 Report on Phytolacca Decandra C H Herrmann Amana
82 Uric Acid F S Clarke, Le Mars
83 Injury to Superficial Palmar Arch H Sigworth Anamosa

American Practitioner and News, Louisville.
October

84 Croupous Pneumonia. A. M Barnett Louisville.
85 Tuberculosis J M Morris Louisville.
86 Appendicitis V A. Voyles Gotebo Okla.

Bulletin of the Johns Hopkins Hospital, Baltimore
November

87 *The Future of the Medical Profession C W Eliot, Boston
88 *The Unity of the Medical Sciences W H Welch Baltimore
89 The International Congress of Tuberculosis Paris 1905 H B Jones Wheeling W Va.
90 Governor John Winthrop Jr of Connecticut as a Physician W R Steiner Baltimore.
91 Advantages of Local Sanatoria in the Treatment of Pulmonary Tuberculosis. D R Lyman Wallingford Conn

87, 88 —See The Journal, Oct 6, 1906, page 1115

Woman's Medical Journal, Toledo, Ohio
October

92 Observations on some Climate Resorts of Europe. E H Root Chicago
93 Dissociation of the Personality J G Kiernan Chicago
94 The Courts of Sonoratown—The Housing Problem as it is to be Found in Los Angeles. B B Stoddard Los Angeles

Southern Medicine and Surgery, Chattanooga, Tenn.
October

95 Pathology and Treatment of Hypertrophied Prostate W A Bryan Nashville, Tenn
96 Operative Treatment of Fibroid Tumors of the Uterus J M Maury Memphis.
97 Life Insurance in its Relation to the Medical Profession J L Crook Jackson, Tenn
98 Diagnosis and Treatment of Syphilis J W Handly Nashville

The Medical Fortnightly, St. Louis.
October 25

99 Errors in Medicine as a Science J Clements Kansas City
100 Typical Chauffeur Injury R. Muhsam Berlin
101 Peritoneal Tuberculosis J Mc H Dean St Louis

Canadian Practitioner and Review, Toronto
October

102 Directions for Nurse and House Physician Burnside Lying in Hospital Toronto
103 Case of Primary Carcinoma of the Liver J G Fitzgerald Baltimore.
104 Medical Thoughts Facts and Fancies J S Sprague Sterling
105 Dionin in Diseases of the Eye R W Rutherford Chatham Ontario

Virginia Medical Semi-Monthly, Richmond
October 12

106 Posterior Displacements of the Uterus with a Description of Mayo's Operation S McGuire, Richmond.
107 Hyoscyamin and Aconitin in the Treatment of the Fever Accompanying Suppuration W H Birchmore Brooklyn N Y
108 Mouth Breathing its Causes Effects and Correction C M Sandusky Jacksonville Fla
109 Epilepsy J S DeJarnette and J W Freed Staunton Va
110 Treatment of Malignant Growths by the Roentgen Rays I C Williams Richmond
111 Primary Abdominal Pregnancy F T Hargrave Norfolk Va

Texas Medical News, Austin.
October

112 Diagnosis and Management of C [illegible] A L Hathcock Palestine Texas.
113 Treatment of Typhoid Fever [illegible] xas
114 Medical Coöperation and the [illegible] tion J W Frazier Bel
115 Chronic Tobacco Poisoning

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

October 15

1 Study of Tropical Diseases. K. Macleod.
2 Universities and Medical Education J Crichton Browne.
3 *Pneumococcal Infection During Early Life. H Ashby
4 *Osteogenesis Imperfecta R. W Lovett and E H Nichols.
5 *Abdominal Atony of Rickets, Its Significance and Its Treatment. W Ewart
6 *Treatment of Tuberculous Abscess. C L. Starr
7 *Rheumatism in Children A. D Blackader
8 *Prevention of Acute Intestinal Diseases of Summer C G Kerley
9 *Dietetic Treatment of Enterocolitis. J L. Morse.
10 *Medicinal Treatment of Enterocolitis. L. E La Fetra
11 *Study of the Absorption of Fats in Infants T P Shaw and A. L. C Gilday
12 Milk Laboratory and Its Relation to Medicine. R Vincent.
13 Congenital Pyloric Stenosis E. Cautley
14 Pyloric Stenosis in Infants. H J Stiles.
15 *Case of Pyloric Hypertrophy C. P Putnam.
16 Then and Now in Surgery C A. Ballance

3 **Pneumococcal Infection During Early Life**—Ashby believes that the pneumococcus plays the chief rôle in bronchopneumonia and in the pneumonias which occur as sequelæ of the zymotic diseases, and that a pneumonic infection is not a local disease of the lungs, but that the cocci enter the blood stream, multiply there and are carried to distant organs A pneumococcic infection involving the lungs primarily is much more apt to spread locally to parts in contact than to affect distant parts by the blood stream Ashby cites several cases of pneumonia complicated by meningitis In one of these cases there existed a pneumococcal meningitis, basic and spinal, which ran a subacute course more or less after the fashion of a bronchopneumonia He says that a greater care of infant life, better nutrition, purer air, and a higher plane of civilization will do more than all else to lower the mortality from pneumonic infection

4 **Osteogenesis Imperfecta**—Lovett and Nichols report a case which came to autopsy The patient, male, weight at birth 8 pounds was born by an easy labor of about nine hours in duration The points of interest in the case were in connection with the legs Both thighs and both legs were broken The right femur showed evidence of a healed fracture at about its middle The fracture was united with an angle outward and forward and on the skin over the thigh on the anterior and outer part of the leg was a small dimple. Union was firm, there was but little callus, and the fracture must have occurred at least three or four weeks before birth The left femur was broken at the middle it showed slight crepitus, and was a loose fracture Both tibias were broken at the junction of the lower and middle third of the leg the fibulas apparently not being broken Both tibias, in addition to being broken were curved forward and slightly outward, and so far as could be judged in the femur, there was a forward and outward bowing there About six weeks after birth there was noticed a fracture of the left clavicle, and an old callus was found on the right humerus The baby lived to the age of 10 months and died of some general affection not intimately associated with the fractures There were in all 10 partial or complete fractures, no one of them occurring after the age of five months.

5 **Abdominal Atony of Rickets**—In the treatment of this condition Ewart resorts to general massage, friction, the sand bath and the salt water bath, electricity, massage of the abdomen, and the elastic abdominal belt His experience with the belt has been most satisfactory He ascribes the results obtained to the automatic action of the belt, the lateral support which it affords to the weak abdominal wall and through this to every vessel in the splanchnic area, the resulting improved distribution of blood with immediate correction of the apparent oligemia, which is one of the features of it, and above all the more effective respiration which quickly corrects the pallor

6 **Treatment of Tuberculous Abscess**—Starr's plan is to incise the abscess freely, evacuate its contents, wipe off the wall with 10 per cent iodoform gauze aided by the curette, clean the cavity as perfectly as possible, using gauze freely to wipe out all débris The wound is closed with sutures placed as deeply as possible to approximate wide areas of tissue Pressure is kept up over the abscess to prevent its filling with serum and a firm antiseptic dressing is applied The result in the majority of cases has been excellent. In only 7 cases was there any breaking down of the wound and a resulting sinus Starr has abandoned the use of iodoform emulsion on account of the dehydrating action of the glycerin In 48 of his cases the cavity has remained perfectly closed and aseptic for periods varying from four months to six years Only 5 of the series of 55 cases required a second evacuation of contents, and one a third

7 **Rheumatism in Children**—Of 23 cases seen in private practice by Blackader, 5 afterward developed a tonsillitis, which he regarded as rheumatic in character, 1 a chorea with endocarditis, and 1 an erythema nodosum Three he associated with a disturbed condition of the digestive tract, 7 he regarded as due to overfatigue of the muscles, and 3 presented evidence of trauma

8 **Prevention of Acute Intestinal Diseases**—Education, according to Kerley, is the only means of preventing the acute intestinal disturbances of infants The mother must be taught how to live, how to care for the baby, how to clothe him and bathe him during the summer It must be impressed on her that he needs all the fresh air available She must be educated to the point of knowing what to do when the first sign of intestinal disease threatens Municipalities, farmers and physicians must be educated so that each may be able to aid in preventing these disturbances

9 **Dietetic Treatment of Enterocolitis**—According to Morse, the object to be aimed at in the dietetic treatment of enterocolitis is such an arrangement of the food as will starve the bacteria without starving the baby The food should be withdrawn for as long a time as the infant can bear starvation, plenty of water being given in the meantime In choosing a substitute for milk, the attempt should be made to select, if possible, a food on which the bacteria which cause the disease grow with difficulty Morse uses whey and pasteurized buttermilk All food given should be very much diluted, It is better to begin with whey mixtures, peptonized mixtures or barley mixtures than with straight modifications The mixtures must never be highly alcoholized, as this tends to throw the work of digestion off of the stomach on to the intestine

10 **Medicinal Treatment of Enterocolitis**—LaFetra advises elimination, through the skin by means of warm baths or sponging, and through the bowel by means of copious, high colon irrigations with alkaline saline solution, atropin 1/1000 of a grain, every two hours, hypodermically, until physiologic action is obtained, hydrochloric acid, pancreatic extract, and tincture of nux vomica or tannate of quinin for stimulation Chalk, magnesia, zinc oxid or bismuth are valuable to soothe the inflamed intestinal mucous membrane Opium in the form of Dover's powder or paregoric may also have to be resorted to in severe cases

11 **Absorption of Fats in Infants**—Shaw and Gilday found that about 4 per cent in nurslings and 5 per cent in bottle fed infants of the fat ingested appears in the feces The fat found in the feces is, to a great extent, fat that has escaped digestion The fatty compounds in the feces exist as neutral fat, fatty acids and soaps The fatty acids are usually in excess of the other two constituents The soaps are relatively increased in artificially fed infants, in infants with a low percentage of fat in the food, and in infants with diarrhea

15 **Pyloric Hypertrophy**—Putnam reports the case of a male infant, three weeks old, in whom the pyloric orifice was dilated with a uterine dilator until it was large enough to admit freely a sound of size French 20 The marked success in this case inclines Putnam to the belief that forceps dilatation with breaking through of the tough tissues may be the best routine way of operating

The Lancet, London.

October 13

17 Infective Endocarditis Involving the Pulmonary Valves and Associated with Imperfection of the Interauricular Septum. T W Griffith.
18 King's College Hospital—A Retrospect T P Teale

19 *Contribution to the Pathology of Chorea F J Poynton and G M Holmes
20 The Type in School Books and College Text books R T Williamson
21 *Agoraphobia—A Remedy C Mercier
22 *Cerebral Tumor Giving Rise to Jacksonian Epilepsy and at a Later Stage Coma J A. C Macewen
23 *Prevention of Cancer Regarded as a Practical Question Ripe for Solution C B Keetley
24 The Workmen's Compensation Bill A Benthall

19 **Pathology of Chorea**—Poynton and Holmes report 3 additional cases in which a diplococcus was found in the pia mater in cases of chorea that proved fatal In addition, this organism was demonstrated in the brains in these cases lying in the perivascular spaces and connective tissue As the result of their study the authors conclude that chorea is a manifestation of acute rheumatism, and that the demonstration of diplococci in each of the three cases is a striking confirmation of the assertion that the *Diplococcus rheumaticus* is the infective agent in acute rheumatism

21 **Agoraphobia**—Mercier reports one case which was improved somewhat under ordinary remedies, but was cured finally by a sudden severe shock caused by the elopement of the patient's daughter

22 **Cerebral Tumor**—In the case reported by Macewen two granulomata, probably syphilitic, were removed from the left motor area of the brain, involving principally the leg and arm centers Seven weeks after the operation the patient was in good health, and was bright and intelligent, although he sometimes found difficulty in expressing himself, particularly when excited The right arm and leg were still deficient in power The patient had no more fits after the operation

23 **Prevention of Cancer**—Keetley lays down the following rules for the prevention of cancer 1 Sterilize the food The majority of cancers attack the alimentary canal, and especially the parts where food and feces tarry 2 The sufficient and regular toilet and protection of the nipples and of the genitalia It is significant that these organs are especially often polluted by stale secretions and discharges, and are more frequently handled by their owners than any other part of the person usually covered by clothing 3 Due care of the mouth and teeth 4 The dressings of discharging malignant sores and tumors should be cured, and especially not to pollute either the fingers or the underlinen 5 Non malignant sores and tumors should be cured, and especially not allowed to drift on if chronic 6 Cancerous and doubtful tumors and ulcers should be excised promptly 7 Abstinence should be practiced from alcohol, tobacco, and from foods which leave waste products, of which the kidneys, the bowels and the skin can not easily and thoroughly get rid and which thereby provoke and sustain the chronic inflammations and ulcers which so often pave the way for cancer 8 Physical familiarity should be avoided, except with those who are nearest and dearest to us 9 Much thought should be given, especially by mistresses and housekeepers, to the service as well as to the cooking of food with a view to disease prevention Special attention should be paid to the sterilization of milk and its products, cheese and butter

Journal of Tropical Medicine, London

October 1

25* Nile Boils F C Madden
26 Three Cases of Infection with Schistosoma Japonicum in Chinese Subjects O T Logan
27 Hemogregarine of Mammals (H Balfouri) and Some Notes on Rats. J B Cleland

25 **Nile Boils**—Under this term Madden describes a particular form of boil peculiar to Egypt which is characterized by the intensity of its inflammation its extraordinary and early tenderness and pain out of all proportion to its naked eye appearances, its characteristic slough and very scanty serous discharge, its rounded button of hard induration and its resistance to treatment until it has run its own course

Journal of the Royal Army Medical Corps, London.

September

28 Note on the Bacteriology of a Series of Cases of Sore Throat J G McNaught.
29 The Griffith Water Sterilizer R H Firth.
30 Heat as a Means of Purifying Water P G Griffith.
31 Enteric Fever Is It Invariably a Water Borne Disease? R. H Quill
32 South African Stock Diseases D Bruce
33 Prevalence of Mediterranean Fever Among British Troops in Malta 1905 (Continued) A M Davies
34 *Continental Surgical Procedure F F Carroll
35 The Humor of Indian Sanitation R H Forman
36 Hints Regarding the Management and Use of X Ray Apparatus F Bruce
37 *Treatment of Enteric Fever with Typhoid Vaccine. C Birt

October

38 Prevalence of Mediterranean Fever Among British Troops in Malta 1905 (Concluded.) A M. Davies
39 *Phagocytosis of Typhoid Bacteria W S Harrison
40 Valvular Diseases of the Heart in British Troops Native Troops and Prisoners in India in the Five Years 1895 1899 and in 1902 and 1903 R R H Moore
41 Incontinence of Urine in the Soldier S G Allen
42 Kala Azar C Birt and H R. Bateman
43 History and Prevalence of Diphtheria in the British Army F Smith
44 *Causation and Prevention of the Spread of Yellow Fever F M Mangin
45 *Action of Cold or Lukewarm Tea on Bacillus Typhosus J G McNaught.
46 Disposal of the Wounded of Mounted Troops. H Hathaway
47 Defects of the Present System of Respiratory Training for the Soldier with Hints Toward Its Improvement R F E Austin
48 Hints Regarding the Management and Use of *X* ray Apparatus F Bruce

34 **Continental Surgical Procedure**—In this article Carroll describes the Mosetig Moorhof method of filling bone cavities with iodoform wax, and the Bier method of employing hyperemia in the treatment of surgical diseases

37 **Treatment of Enteric Fever with Typhoid Vaccine**—Birt suggests that 0 02 c c., or 10,000,000 typhoid bacilli, should be the dose employed for therapeutic inoculation The amount should be gauged in each case so as to produce as few constitutional and local symptoms as possible The blood changes which arise after inoculations should be studied by means of opsonic index determination, if possible, but by keeping the daily dose below the limit at which a reaction begins to appear no evil will result from a lack of knowledge of the actual blood condition The site of the injection should vary, no part should be twice inoculated Early treatment is insisted on before gross lesions have set in No cases are reported.

39 **Phagocytosis of Typhoid Bacteria**—Harrison found that the phagocytes are inactive toward typhoid bacilli, except in the presence of serum, and that normal blood depends for its phagocytic activity toward typhoid bacilli chiefly on an opsonin which differs from the opsonins for staphylococcus in being thermostable He thinks that in immune blood the phagocytosis of the typhoid bacillus is chiefly encouraged by a thermostabile substance which acts not as an opsonin, but probably by stimulating the white cells

44 **Yellow Fever**—Mangin emphasizes the importance of early segregation of every suspicious case of fever, the protection of the patient from the bites of the specific mosquito, and the destruction of infected insects

45 **Action of Tea on Typhoid Bacillus**—As the result of an investigation of the action of cold tea on the typhoid bacillus, McNaught found that after four hours' contact the organism diminished greatly in numbers, and that after 20 hours it could not be recovered from cold tea The tea was prepared by pouring about one liter of boiling water on three heaped up teaspoonfuls of tea The tea was allowed to infuse for 10 minutes McNaught suggests that cold tea may be used as a substitute for water in soldier's water bottles on active service

Annales de l'Institut Pasteur, Paris

Last indexed page 971

49 (XX No 8) *Origine intestinale de la tuberculose pulmonaire et mécanisme de l'infection tuberculeuse A. Calmette and C Guerin (Lille)
50 Etudes sur la morve expérimentale du cobaye (glanders in guinea pig) Nicolle. (Continued)
51 Etudes sur les trypanosomiases de Berbérie en 1905 E and Et Sergent
52 Action du radium sur le virus rabique G Tizzoni and A Bongiovanni See abstract on page 547
53 (No 9) Sensibilité des ruminants et des singes au trypanosome de la dourine (susceptibility of ruminants and monkeys) F Mesnil and J Rouget
54 *Le microbe de la coqueluche (of whooping cough) J Bordet and O Gengou (Brussels)
55 Epithélioma contagieux des oiseaux (of birds) F Burnet.
56 Des relations de la fièvre tropicale avec la quarte et la tierce, d'après des observations prises au Sénégal Thiroux
57 Etude des corps intra-épithéliaux de Guarnieri H Aldershoff and C M Broers (U[illegible]

49 Intestinal Origin of Pulmonary Tuberculosis—In this third communication Calmette states emphatically that any errors due to accidental inhalation of the microbes or insoluble particles were most scrupulously guarded against His technic has been reviewed editorially in THE JOURNAL, Oct 6, 1906 page 1100 The animals were fed once with virulent tubercle bacilli, and the bacilli were refound in the lungs as early as the twenty fourth hour in the adult animals, but not until the fifth day in the younger ones The bacilli pass through the intercellular spaces in the intestinal epithelium without leaving a trace of their passage. As soon as they enter the chyle vessels they are incorporated by leucocytes and these transport them to the regional lymph nodes, where they are retained a longer or shorter time in proportion to the youth of the animal In the very young animals they accumulate in the cortical layer of the lymph node, and, if the amount of bacilli ingested was not very large, they remain there and produce tuberculous lesions If only a small amount of bacilli are ingested, the lymph nodes retain them, increase in size and allow a few—still incorporated in the leucocytes—to escape into the thoracic duct, and finally the nodes subside to normal size again Inoculation of these glands in guinea pigs shows that for a few months they still contain a small number of bacilli If a considerable quantity of bacilli are ingested, small translucid tubercles appear throughout the lungs, but especially at the apices, on the anterior margins, and the pleural aspect, resembling in every respect fresh glanders tubercles in the horse After a calf has had the single infecting meal he reacts to tuberculin by the twenty fifth to the thirtieth day The tuberculous lesions are then established, but, as a rule, they gradually heal, and after three or four months the tuberculin reaction no longer occurs and inoculation of the fibrous subpleural cicatricial tissue in the small cicatrices left no longer infects a guinea pig In adult animals there is no reaction on the part of the regional lymph nodes and the pulmonary lesions become established at once Calmette is convinced that in the immense majority of cases, with the exception only of those in which bacilli were inhaled directly on some pre existing lesion of the larynx or trachea, the pleural and pulmonary localizations of tuberculosis result from the arrest in the capillaries of the lungs or pleura of microphagic leucocytes immobilized by the toxic secretions of the bacilli which they have taken up The same can probably be said also of all the localizations of tuberculosis in the bones, joints, meninges, etc. Glandular tuberculosis, he adds, is of intestinal origin Its frequency in the young is explained by the special histologic characteristics of the lymphatics at this age Animals healing spontaneously, so that they cease to react to tuberculin after a few months, are no longer susceptible to infection and can tolerate ingestion of comparatively large amounts of tubercle bacilli, at least for a certain period They are thus vaccinated On the other hand, animals given a second and third infecting meal, before they have entirely recovered from the first infection, never become cured Their lesions continue always a progressive course This explains why men and animals so often present entirely healed tuberculous lesions They became infected, with tuberculosis and had time to have their lesions heal before a second infection occurred, and thus they became vaccinated Research on this aspect of vaccination is now in progress

54 The Microbe of Whooping Cough—Bordet and Gengou give an illustrated description of the microbe which they have discovered in whooping cough and to which they ascribe specific etiologic importance It is not agglutinated by serum from persons who have never had whooping cough or who had it many years before while it is always agglutinated by serum from children convalescing from whooping cough Another argument is the intensity in this serum of the sensitizing power manifested by the fixation of the alexin In the absence of the whooping cough bacilli, the serum leaves the alexin entirely free Experiments in the line of an effectual serum treatment or active immunization are now under way

Bulletin de l'Acadêmie de Médecine, Paris.

Last indexed page 812.

58 (Year LXX, No 32.) *La syphilis des honnêtes femmes (wives infected by their husbands) A. Fournier
59 **Pathogénie et prophylaxie actuelles du paludisme* Kelsch

58 Wives Infected with Syphilis by Their Husbands.—Fournier states that one fifth of all the syphilitic women whom he has had occasion to treat had been infected by their husbands, and in 218 out of 312 cases by husbands who were syphilitic at the time of their marriage. In 130 out of 151 cases the infection occurred during the first year of married life, and in all but 13, during the first six months In 142 cases the syphilitic infection in the husband dated in 37 cases from a few weeks to a year, from one to two years in 31, and from two to three years in 30, that is to say, that two thirds of the men married while they were still in an infecting stage of the disease Fournier used to believe that three or four years' delay was sufficient to guarantee against infection of the wife, but now he declares that four or five years are necessary, and he says that another quarter century of experience might lead him to lengthen the period still further In 9 cases the syphilis was transmitted in the second year after the marriage, in 3 in the third year, in 3 in the fourth, in 2 in the fifth, in 3 in the sixth, in 2 in the seventh, and in 1 case each during the eighth and ninth year after marriage This astonishingly tardy transmission of the disease, he says, confers a new physiognomy on syphilis, demonstrating a tardy secondary syphilis Recent research has demonstrated that the secondary period is not always restricted to the first three years of the disease, but may develop, with typical secondary symptoms, at the fifth, eighth, tenth, fifteenth or twentieth year, or later still This tardy secondary syphilis entails tardy secondary contagion if occasion offers

59 Pathogenesis and Prophylaxis of Malaria.—Kelsch does not deny the mosquito theory of the transmission of malarial infection, but he believes that this does not exhaust all the possibilities of transmission of the infection Experience has too often demonstrated that epidemics of malaria follow extensive turning up of the soil and excessively hot seasons, ingestion of dust laden food, over exertion, and other faults against hygiene. The distribution of the anopheles, also, does not always correspond to the distribution of malarial foci, and there can be no doubt that the hematozoon finds other ways of access to the body than in mosquito bites In all his experience with malaria in France he has never known of an instance of the direct transmission of malaria from man to man Malaria is very prevalent in Madagascar at present, and he ascribes the epidemic to the extensive sanitary works now under way there

Archiv f Gynäkologie, Berlin

Last indexed page 973

60 (LXXIX, No 3) *Dauererfolge der Ovariotomie (remote results) D von Velits
61 *Ueber doppelseitige metastatische Ovarial-Carcinome. M Stickel
62 The So-called Causes of Birth—Die So-gen Ursachen der Geburt. F A. Kehrer (Heidelberg)
63 Behandlung des Puerperal Fiebers mit Paltauf schem Streptokokken Serum O Burkard
64 *Ueber die teratoiden Geschwülste des Eierstockes (ovarian tumors) H. Neuhäuser

60 Remote Results of Ovariotomy—For 15 years von Velits has been making a special study of ovarian tumors, with histologic examination and continued oversight of many of the patients The total number that came under observation was 149, and operation was performed in 120 cases He analyzes this material from various standpoints, with illustrations of special features His experience has shown that cancer in the ovary threatens chiefly the peritoneum Implantation in the peritoneum can be hastened by increased centrifugal proliferation of the cancer elements with perforation of the tumor wall, or by direct contact of the tumor with the peritoneum when impacted in the pouch of Douglas, or by rupture of a cyst in consequence of torsion of the pedicle, or by flat, inflammatory adhesion, which is the worst of all complications as the cancer grows into the lymphatics in the adhesion membranes. The patient succumbs to the influence of this peritoneal implantation before the cancer has involved the other ovary, the uterus, the broad ligaments or more distant organs Improvement in the outlook in cases of ovarian cancer can be anticipated in the future only from earlier operations The absolute and remote proportion of permanent cures in his material was 12 5 per cent in operations for removal of ovarian cancer In operations for non malignant growths the proportion of permanent cures (after 5 years) is 100 per cent He found the genuine, solid cancers of the ovary characterized by lesser malignancy than the cystic "papillary" cancers As these solid cancers generally develop in the comparatively young, the other, sound ovary can be retained without much fear that this conservative treatment will avenge itself by later tumor formation in the retained organ The tendency to tumor formation in individual cases is unmistakable, and justifies removal of the sound ovary even with non malignant growths. Years after the removal of an innocent dermoid the other ovary may present a malignant tumor, inoperable when first discovered, as has happened in his experience Sarcoma in the young is an exception to this rule as it shows little tendency to develop bilaterally In one of his cases a pseudo mucinous cystoma was associated with a large goiter and dermoid cyst In 5 cases a pseudo-mucinous cystoma was associated with a dermoid cyst

61 **Bilateral Metastatic Ovarian Carcinomata**—Stickel reports 13 cases of metastatic carcinoma in both ovaries In 9 the primary tumor was in the stomach In another case the primary tumor was in the ascending colon, and in 3 others in the breast The patients were 26, 30, 36, 41, 44 or 45 years old except 3 who were 52 or 56 Careful examination of the ovaries should be a preliminary to every operation for removal of a primary cancer of the breast, stomach, gall bladder or intestine. They may be found in metastatic degeneration before any infiltrated retroperitoneal glands can be discovered, and while the abdominal cavity otherwise is still free from metastases In case of bilateral ovarian cancer, the most diligent search should be made for a primary tumor elsewhere It may be so small that it can not be detected by palpation, and all diagnostic measures should be brought into play to discover whether a primary growth exists elsewhere in the abdomen

64 **Teratoid Ovarian Tumors**—Neuhäuser reports 2 new cases and reviews 33 others Early extirpation has given 26 9 per cent. permanent cures in 26 cases Nearly 43 per cent. of the patients succumbed to a recurrence within a year, and 19 2 per cent died immediately after the operation It seems that a pregnancy is liable to arouse a hitherto latent teratoid ovarian tumor to rapid growth Metastasis occurs by way of implantation as well as through the lymphatics and blood, but experience has shown that existing peritoneal metastases are liable to retrogress spontaneously after the laparotomy It is impossible to tell whether the tumor is malignant or non malignant, even with the microscope It may be extremely malignant without showing either carcinomatous or sarcomatous degeneration.

Berliner klinische Wochenschrift.

65 (XLIII No 37) Zur chirurgischen Behandlung des Magengeschwürs (gastric ulcer) L R. von R. Rydygier
66 Die Silber Spirochaete. W Schulze.
67* Ueber Spirochætenbefunde bei Carcinom und bei Syphilis H. Friedenthal
68 Ueber die Pollantintherapie des Heufiebers (of hay fever) C. Zarniko
69 Die diagnostische Bedeutung hypochondrischer Vorstellungen Rauschke.
70 (No 38) Ueber drei mit Serum behandelte Fälle von Tetanus traumaticus. J Kentzler
71 Ueber den Wert des Komplementablenkungs Verfahrens in der bakteriologischen Diagnostik (deviation of complement test) C Moreschi.
72 Ueber Nystagmus toxicus Th Weyl
73 *Zur Pathologie und Therapie der Gallensteinkrankheit (gall stone disease) L. v Aldor
74 Zur Kenntnis des congenitalen Myxödems und der Skelett Wachstumsverhältnisse bei demselben P Argutinsky (Commenced in No 37)
75 (No 39) Ordinary Hemorrhages from the Kidneys.—Ueber gewöhnliche Nierenblutungen. Casper
76 *Ueber die Heilung postoperativer Fisteln der Bauchhöhle durch Vaccine-Behandlung nach dem Wrightschen Prinzip E. M. Weinstein.
77 Klinisches und Experimentelles über Gastroptose. E. Rosenberg.
78 Conception of Neurasthenia.—Ueber den Begriff der Neurasthenie. T Dunin.

67 **Spirochetes in Cancer and in Syphilis**.—Friedenthal thinks that too much is being taken for granted in regard to the connection between spirochetes and syphilis The silver stained spirochetes are closely simulated by silver stained scraps of elastic fibers twisted into spirals by the contracting influence of alcohol as also by coils of unmedullated nerve tissue He gives an illustration of deceptive spiral bodies in carcinoma tissue which are merely silver deposited in the form of spiral twists in thickened stretches of protoplasm, without the presence of any parasites

73 **Treatment of Gallstone Affections**—In this condition it is not the presence of gallstones that causes the trouble, von Aldor states, but superposed infection There can be no cholecystitis without infection Riedel has calculated that there are two million people in Germany sheltering gallstones, but only one twentieth ever become conscious of their presence Autopsy frequently reveals gallstones in persons who were never aware of their presence during life He has also frequently observed cholecystitis heal, or at least pass into a phase of absolute latency, although no stones were evacuated Körte has recently published reports of some cases in which the clinical picture of cholelithiasis, was accompanied by the typical pathologic findings of infectious cholecystitis and yet no stones could be discovered in any of the cases He also had bacteriologic examinations made in seventy five cases in which he operated, with positive findings in every instance From these facts von Aldor reasons that a gallstone affection is not due to the migration or impaction of a stone, but rather to the development of an infectious process in the gall bladder, which entails secondarily the impaction of the stone or its migration. He has been making a special study of the feces in his gallstone cases during the last few years, and was able to demonstrate objectively the existence of a catarrhal affection of the small or large intestine or of both in more than half the cases In all there was a history of sluggish action of the bowels or obstinate constipation On the other hand, he found evidences of acute intestinal catarrh in less than a dozen instances The gallstone affection was almost invariably more serious in the cases with the severer intestinal disturbances These facts explain the apparent efficacy of many of the vaunted gallstone remedies They contain more or less drastic purgatives, and they give unmistakable relief, although they have the drawbacks of all purgatives in catarrh of the intestines, aggravating the condition in time The more gallstone patients he has occasion to observe, the more he is convinced that systematic and persevering internal treatment will prove successful in many cases heretofore turned over to the surgeon The only absolute indications for operative treatment which he recognizes are the rare cases of acute choledochitis acompanied by symptoms of severe inflammation of the gall bladder, and in acute and chronic empyema of the gall bladder As relative indications he regards the cases of chronically recurring cholecystitis and chronic choledochitis which have proved refractory to months of Carlsbad treatment with repose, also dropsy of the gall bladder causing the patient much disturbance, and, finally, circumstances which forbid the patient's giving up the time to a Carlsbad "cure" The most grateful field for internal treatment is chronic choledochitis without repeated chills and remittent fever, but it requires the greatest patience. A cure is seldom realized in less than 4 or 5 months, but it is possible to avoid an operation by this time If the patient is under constant medical supervision, the development of serious complications need scarcely be feared In one case Kehr operated successfully, although the choledochitis had lasted for 12 years The main point in internal treatment is repose, and this must be absolute until the last trace of the cholecystitis has completely retrogressed This may occur sometimes in 4 or 5 weeks, in other cases not until after 8 or 10 weeks or still longer After all traces of swelling of the gall bladder and of the slightest tenderness have vanished, he orders much exercise and copious drinking of Carlsbad water, kept up for a year Whether to take this Carlsbad "cure" at home or at Carlsbad or elsewhere depends on the patient's circumstances The efficacy of the water is probably due to its anti catarrhal action

76 **Treatment of Postoperative Fistula by Vaccines According to Wright's Principle**—Weinstein has been treating at Landau's clinic a number of cases of fistulæ after laparotomies by applying Wright's method of vaccine production with the patient's own individual bacteria from the fistula In the first three cases the infection was found to be the work of streptococci and in the fourth of streptococci plus the colon [illegible]us The operation had been done on account [illegible] in the last three patients The first t

healed, the third is nearly healed, but the fecal fistula in the fourth case still persists unhealed, owing to constantly renewed infection His findings confirm those of Wright in every particular

Deutsche medizinische Wochenschrift, Berlin and Leipsic

79 (XXXII No 38) *Laryngotomy in Radical Treatment of Laryngeal Cancer—Ueber die Radikalop des Kehlkopfkrebses mittels Kehlkopfspaltung H von Bruns (Tübingen)
80 Ueber Neurasthenie und ihre klimatische und balneotherap Behandlung E Romberg (Ib)
81* Ueber vasomotorische Krampfzustände bei echter Angina pectoris (cramps in peripheral vessels) H Curschmann (Ib)
82* Zur Funktionsprüfung der Arterien (functional tests of separate arteries) P Müller (Ib) (Continued.)
83 *Ueber den Kampf wider das Uterus Carcinom. Döderlein (Ib)
84 *To Reduce Size of Ovarian Tumors to Aid in Excision—Ist die Verkleinerung der Ov Tumoren zwecks operative Entfernung zulässig? O Sarwey (Ib)
85* Lumbal Anästhesie in der Gynäkologie und Geburtshilfe (and in obstetrics) K. Baisch (Ib)
86 Ueber die primären tuberculösen Uveal Erkrankungen G Schleich (Ib)
87 Fall von Pancreas Fistel nach operierter Pancreatitis hæmorrhagica. W Schmidt (Stuttgart)
88 Mercury in the Body—Vorkommen von metallischem Quecksilber im menschlichen Körper (Id.)

79 **Incision of Larynx in Treatment of Laryngeal Cancer**—A surprisingly large proportion of patients with laryngeal cancer are being cured now by the modern radical operation, von Bruns asserts This progress is not due so much to improved technic as to the improvement in early diagnosing, selection of methods, etc He adds that the sad fate of the second German emperor stimulated laryngologists and surgeons all over the world to a closer study of laryngeal cancer The various important points that have been learned are reviewed Partial removal of the larynx is now generally preferred to total, and incision of the larynx (thyrotomy), as a preliminary to excision of the cancer, is constantly finding new advocates Bruns has done thyrotomy in 10 cases of laryngeal cancer, and reports 7 recoveries of from 2 to 15 years' duration without a death Thyrotomy is indicated only in the early stages of internal laryngeal cancer The voice is altered so little by it that two of his patients, who were teachers, were able to continue teaching Out of 114 cases reported since 1890, the mortality was 9 per cent, with 22 per cent. recurrences, while in 48 per cent the patients were cured for at least a year He concludes with a description of the technic and a denunciation of exclusively endolaryngeal operations for laryngeal cancer

81 **Spasmodic Vasomotor Contraction with True Angina Pectoris**—Curschmann declares that far too little attention has been paid to the underlying or accompanying angina pectoris in cases of peripheral vasomotor cramps He describes four cases in detail in which the assumption of underlying angina pectoris was confirmed by the course of the cases or autopsy findings In a fifth case the trouble was of exclusively nervous origin, a purely nervous vasomotor angina pectoris, as Nothnagel described it Curschmann's four cases show that the entire clinical picture of the latter can develop on the basis of, or as an accompaniment to true angina pectoris One patient had chronic cardiac insufficiency, true angina pectoris, and angioneurotic vascular cramps in arms, feet and face, with incipient nephritis The second had chronic insufficiency of the heart, sclerosis of the coronaries, and peripheral vasomotor neurotic disturbances in hands, brain and face, with arthritis In the third case there was aneurism of the ascending aorta plus angina pectoris with attacks of amaurosis on the right side

82 **Functional Tests of Arteries**—Müller comments on the way in which the idea is gaining ground that the circulation in its various parts, is possessed of independent functional capacity Study of each part separately is liable to afford instructive information, as he shows by specific examples The reaction induced in the vascular wall under various stimuli cold, heat, etc., is best studied with the plethysmograph, the findings are not absolutely exact, but they reveal whether the arteries have normal elasticity or not, and whether it is above or below normal He has been making hundreds of tests on various persons The principal tests were the application of a smooth piece of ice, 6x10 cm, to the bicipital groove. This brought the ice close to the brachial artery The heat reflex was elicited by sending hot water througn a rubber tube wound around the entire upper arm. The thermometer should show that the heat at the arm reaches 40 C., no higher This is ensured by sending 10 liters of water at 50 C through a medium sized tube in the course of two minutes At the end of the second minute water at body temperature is sent through the tube, and the arm thus restored to normal temperature Repeating these tests on the same person several times gave remarkably concordant findings

83 **Uterine Cancer**—Döderlein states that at his clinic in Tübingen the vaginal route has been definitely abandoned.

84 **Is It Permissible to Remove Ovarian Tumors in Sections?**—Sarwey writes from the same clinic to announce that it is the practice there to reduce the size of an ovarian tumor before attempting to remove it In 190 cases in which this was done, including 90 verified cystadenomata, no grafting of the tumor occurred in any instance Experience has shown that the length of the incision is an important factor in the results, and he now operates through a small incision, removing the growth in sections Vaginal ovariotomy is restricted to cystic and semicystic, small and medium tumors that can be reduced in size and which are uncomplicated, freely movable, and readily accessible from below A suprapubic transverse incision is suitable also for solid, movable tumors as large as a child's head Autopsy has shown that cancers, supposed to be result of grafting, always turned out to be primary cancers in the stomach or elsewhere If the tumor is as large as a man's head or larger, he removes it through the small incision whenever possible, ready to enlarge the incision at need.

85 **Spinal Anesthesia in Gynecology and Obstetrics**—Baisch sustains Döderlein in his affirmation that "Bier's invention of spinal anesthesia promises to become the sovereign technic for anesthesia in gynecology" Stovain, novacocain and tropacocain were used indiscriminately in 150 operative cases, including 40 laparotomies of the most serious kind. The original technic has been modified and the scopolamin technic combined with it to avoid certain drawbacks, especially the patients' knowledge of the operation He insists that the fatalities from respiratory paralysis have all been unquestionably due to overdoses or to gross disregard of indications The technic of the combined method is simpler than that of ordinary methods, the preliminary subcutaneous injection being made by the nurse, according to Krönig's directions It seems to be perfectly harmless Notwithstanding the minute amounts—scopolamin, 0 0006 gm, morphin, 0 02 gm, tropacocain, 0 05 gm, ether, from 5 to 10 gm—the anesthesia is generally ample for the purpose This technic is valuable also, he states, in cases of difficult delivery, with or without raising the pelvis

Monatsschrift f Geb u Gynäkologie, Berlin.

Last indexed page 1235

89 (XXIV No 3) Zur Physiologie und Pathologie der Placentation L. Stolper
90 *Ueber Gefahren der Pubiotomie und Vorschläge zu deren Verhütung (dangers and means to prevent them) W Rühl
91 Bilateral Ankylosis of Hip Joints Absolute Contracted Pelvis Severe Nephritis Supravaginal Amputation at Fifth Month of Pregnancy Recovery—Supravaginale Amputation des Uterus gravidus V mens. etc. A. Sippel
92 Ueber Plasma und Decidua Cellen K J Wederhake
93 *Simulated Extrauterine Pregnancy—Ueber vorgetäuschte Extrauterinschwangerschaft, zugleich ein Beitrag zu den Corpus luteum Blutungen C Weinbrenner
94 *2 in der Landpraxis mit glücklichem Ausgang erfolgte Kaiserschnitte (Cesarean section in country practice) K. Franz
95 *Spinal Anesthesia for Gynecologic Operations—Die Medullarnarkose bei gyn. Op R. Pforte

90 **To Prevent Injury in Pubiotomy**—Rühl advises prophylactic detaching of the bladder wall from the vagina to prevent injury of the bladder in sawing the pubic bone He makes a small incision in the anterior vault of the vagina, detaches the bladder and pushes it as high up as possible, entirely out of the way of the contemplated operation, holding the organ with a stitch to prevent its lapsing back. This extreme measure is necessary only in case of exceedingly contracted pelvis with preceding inflammation in the small pelvis and very rigid vaginal walls If a rigid vaginal vault tears as the bones separate, the further extension of the tear may be prevented by vaginoperineal incisions

93 **Simulated Extrauterine Pregnancy**—Weinbrenner relates the details of two cases in which a hemorrhage in a corpus luteum, already in cystic degeneration, burst the walls of the cyst and free hemorrhage into the abdominal cavity followed In one instance the hyperemia was still further enhanced by

torsion of the pedicle of a cystic ovary The clinical diagnosis in each case was tubal pregnancy, but the microscope excluded the possibility of a pregnancy

94 **Cesarean Section in Country Practice**—Franz reports 2 cases in which Cesarean section was performed under extremely unfavorable conditions but with favorable outcome for both mother and child in each instance The instruments, etc, were sterilized at the physician's home, and the aseptic operation was performed with the aid of two other physicians, one taking charge of the anesthetic. The principal factor in this favorable result is assumed to be the fact that the birth passages were left undisturbed, and thus there was no fear of imported infection

95 **Spinal Anesthesia for Gynecologic Operations**—Pforte reports 50 abdominal and 50 vaginal operations performed under spinal anesthesia at Königsberg The verdict is favorable He says that the technic is most excellent for all operations that do not involve the peritoneum, and, even with laparotomies it reduces the amount of chloroform necessary, and eliminates postoperative shock.

Münchener medizinische Wochenschrift.

96 (LIII, No 31) *Retention of Sphincter in Removal of Rectal Cancer—Zur Frage der Erhaltung des Schliessmuskels bei der Exstirpation des Mastdarmkrebses P Poppert
97 Ueber proteolytische Ferment Wirkungen der Leukozyten E. Muller and G Jochmann.
98 Ueber 2 Fälle von zerebraler Hémiplegie im Kindesalter (in children) H Wichern
99 *Ein neuer Apparat zur Hyperämie-Behandlung des Kopfes (to induce hyperemia of head) V Schmieden
100 Ueber eine bessere Darstellungsart der Spirochæta pallida im Ausstrich (improved smear technic) E Hoffmann and A. Halle.
101 Gymnastic Treatment of Joint Contracture by General Practitioner—Wie kann der praktische Arzt die gymnastische Behandlung der Gelenkkontrakturen durchführen? G Hohmann.
102 Ueber Verlagerung der Trachea bei intrathorazischen Erkrankungen (displacement of trachea) A. Grober
103 Ueber die Verwendung von Formalin Lösungen bei der Uhlenhuthschen Blutuntersuchung (technic of biologic blood test) H Merkel
104 *Practical Application of Continuous Temperature Register—Ueber die praktische Verwertung der Dauermessung E Oertmann (Wurzen)
105 Die Ortho-Kystoskopie J Weinberg
106 Plastische Röntgen Bilder A E Stein
107 *Leaflet to Give to Mothers—Eine neue Merktafel für Mütter H. Rosenhaupt.
108 (No 32) Zur Frage der teleangiektatischen Granulome. H Bennecke
109 *Acute Dilatation of the Stomach and the So-called Arterio-mesenteric Intestinal Occlusion—Ueber akute Magenerweiterung und sogenannten arterio-mesenterialen Darmverschluss Neck
110 Behandlung akuter Arthritiden mit intravenösen Kollargol Injektionen G Riebold
111 Zur Behandlung hysterischer Kontrakturen der unteren Extremitäten durch Lumbal Anästhesie H Lohrer
112 *Neuroses of the Heart and Exophthalmic Goiter—Herzneurosen und Basedow M Fischer
113 4 Fälle von Epithel Zysten L Klein
114 Behavior of Typhoid Bacilli in Blood in Respect to Its Bactericidal Action—Ueber das Verhalten der im Blute der Typhuskranken nachweisbaren Typhusbazillen gegenüber der bakteriziden Wirkung des Blutes A Lemierre.
115 Improved Appliance for Suction Therapy—Ein einfacher und praktischer Apparat für die Biersche Stauung O Muck
116 Die Behandlung der Stiele bei gynäkologischen Operationen (treatment of stumps) L. v Stubenrauch
117 (No 33) Discussion of Anesthetics—Die modernen Bestrebungen zur Verminderung der Narkosengefahr W Wendel
118 Die Prognose und Therapie der Cholelithiasis im Lichte der Statistik und Erfahrung A. Ritter
119* Der Nachweis des Toxins in dem Blute des Diphtherie-Kranken (toxins in blood) A Uffenheimer
120 *Typhoid Bacilli Carriers in an Insane Asylum—Ueber bemerkenswerte Befunde bei Untersuchungen auf das Vorhandensein von Typhusbazillenträgern in einer Irrenanstalt. A Nieter and H Liefmann
121 Ueber Antagonismus zwischen normalen und immunen bakteriziden Sera S Korschun
122 *Ueber die Beziehungen der Tetanie zum weiblichen Sexualapparat E. Gross
123 Silver Acetate to Prevent Ophthalmia Neonatorum—Ueber die Prophylaxe der Blennorrhoe der Neugeborenen Thies
124 Prurigo Following Intestinal Catarrh—Zur Etiologie der Prurigo L. Steiner and H Vorner

96 **Retention of Sphincter Muscle in Removal of Rectal Cancer**—Poppert analyzes the literature on this subject, the results compelling him to warn decidedly against sacrificing the sphincter if it can possibly be saved He reports 17 patients out of 60 permanently cured by resection of a rectal cancer One patient has had no signs of recurrence during 15 years, and others for 9, 7, etc, to date Among these cured cases are 8 treated by amputation and 9 by resection These results proclaim that resection need not be abandoned for amputation He prefers resection with circular suture of the intestine according to Kraske, without disturbing the sphincter muscle. Other methods are much less certain The more thorough the preparation, the more cautious and sparing the use of the knife, the more frequently will we be able to cure the patient without burdening him with distressing incontinence

99 **Apparatus to Induce Hyperemia in the Head.**—Schmieden gives an illustrated description of a glass bell that fits air tight over head and neck and allows the application of the Bier technic

104 **Permanent Temperature Record.**—Oertmann presents a maximal thermometer made on the principle of a hemorrhoid pessary, and another combined with a uterine pessary, and one to fasten continuously in the axilla By this means it is possible to learn the temperature of the body at all times of the day, not merely on a casual, brief examination

107 **Leaflet to Give to Young Mothers**—Twelve rules are given on the leaflet, the first four urging the mother to nurse the child and presenting as one argument the conclusions of von Bollinger's investigations, which showed that women who had not nursed their children were more frequently affected with mammary cancer than those who had Another of the rules states that the mother must not attribute any sickness of the child to its teething " there is no sickness that comes from teething, if the child is sick, it can be only because it is ailing from some other cause while it is teething" He agrees with Kassowitz that altogether too much etiologic importance is ascribed to teething

109 **Acute Dilatation of the Stomach.**—Neck remarks that it is of the utmost importance that this condition should be recognized early, as it is generally easily remedied by appropriate treatment, while liable to prove fatal without it The correct diagnosis was made in only 13 out of 60 cases on record, he says, and then almost always by physicians who had lost patients with similar symptoms and who had been enlightened as to their cause by the autopsy As a rule, the first symptom is sudden, violent vomiting, accompanied by more or less intense pain in various parts of the distended abdomen The pulse is small and rapid, but the temperature is normal The absence of high temperature allows peritonitis to be excluded, as this is usually accompanied by fever In other respects the symptoms suggest peritonitis, and the peritoneum is liable to become inflamed secondarily Another differentiating point is an encapsulated collection of fluid in the left side of the abdomen The stomach tube affords the most reliable information, and evacuation of the contents of the stomach through it is the most important measure in treatment. The pelvis should be raised while the stomach is being emptied and the organ should be rinsed out systematically several times a day at first. It is important to be sure that the stomach sound reaches down into the fluid In some of the cases that proved fatal after the stomach had been rinsed several times, this result was probably due to the fact that the sound had failed to evacuate all the fluid No food should be taken by the mouth until the stomach has entirely recuperated The prognosis is grave unless proper treatment is instituted at once Out of the 64 cases known, 47 proved fatal In one of Neck's 4 cases the acute dilatation followed overloading the stomach with fresh fruit, the patient was a young man of 16 In 2 others there was a tendency to kyphoscoliosis since youth, which he thinks had induced a predisposition to ptosis or dilatation of the stomach on slight provocation In 29 of the total cases on record the acute dilatation of the stomach followed chloroform anesthesia, and in 11 of these cases the operation had not involved the abdomen but was at points remote from it It is evident that the chloroform must have entered the stomach and injured the muscular and nervous elements so seriously that acute dilatation was the result It may occur in a stomach apparently entirely healthy, and in robust persons, although in most cases there was some predisposing factor such as debility after an illness, a stomach affection or downward displacement

112 **Cardiac Neuroses and Exophthalmic Goiter**—Fischer asserts that exophthalmic goiter occurs much more frequently than is [illegible], especially the form in which the

exophthalmos and the enlargement of the thyroid are not pronounced enough to attract attention The affection is generally diagnosed as "neurasthenia," "anemia," or "cardiac neurosis," but is refractory to all the measures ordinarily successful on this diagnosis The patients are generally women with some disturbance in the genital sphere, either puberty or the menopause, metrorrhagia or amenorrhea The connection between the thyroid gland and processes in the uterus has long been known Osteomalacia has recently been attributed to hyper functioning of the thyroid. The patients sometimes have gastrointestinal disturbances, attacks of vomiting diarrhea for months, and the like Their chief concern, however, is in regard to the heart, whose disturbing or painful palpitations distress them and may induce dyspnea and syncopal conditions The objective findings range from simple acceleration of the pulse to extensive dilatation of the heart and whistling murmurs All the patients complain that they are out of order, they feel uncertain, not sure of themselves, sometimes as if they were living in a dream, and all agree that the attacks come on with the greatest irregularity and without appreciable cause There is no history of nervous antecedents If in such cases the symptoms persist under internal treatment, and if there is suspicion of enlargement of the thyroid, treatment should be addressed to the thyroid It is not necessary to call the patient's attention to this blemish, merely prescribing ostensibly for the cardiac neurosis As a rule it will be found that the gland has always been rather large since youth Two or three weeks of treatment addressed to neutralizing the toxins elaborated by the thyroid gland produced remarkable improvement in four cases in his experience in the last few months Rest for body and mind is an important adjuvant.

119 **Toxins in Blood in Diphtheria.**—Uffenheimer has found a toxin in the blood of diphtheria patients at an early stage, and has found it possible to differentiate the disease by injection of animals, before the bacteriologic test was positive He injected only a small amount of the toxin, and accepted as a positive response the palpable infiltration of the subcutaneous cellular tissue without waiting for more prominent signs When the animals were killed later the signs were so pronounced then as to be unmistakable Out of 14 cases of diphtheria he found the toxin present in 6, dubious in 4, absent in 4 The repeated finding of the toxin in some of the cases imposes the necessity for prompt neutralization with antitoxin, repeating the injections of antitoxin again and again to neutralize the toxin in the blood as it is formed, and also to draw out from the tissues the toxin already anchored in them and to render it harmless Dönitz has demonstrated that large amounts of the antitoxin are able to attract out of the tissues the toxin already settled in them, and to neutralize it.

120 **Typhoid Bacilli Carriers in an Insane Asylum.**—Nieter states that typhoid and dysentery have been endemic in the asylum in question for several years There are about 900 inmates, but most of the cases occurred in a pavilion with 250 inmates Typhoid bacilli were found in the stools of a patient suffering from acute dysentery Her serum agglutinated the typhoid bacillus at 1 to 100 and the Flexner dysentery bacillus at 1 to 800 At the autopsy of another patient who had succumbed to chronic dysentery typhoid bacilli were found in the intestines and in pure culture in the gall bladder, which contained gallstones Typhoid bacilli were agglutinated at 1 to 50 and Flexner bacilli at 1 to 100 Further research revealed 5 more typhoid bacilli carriers, that is, a total of 7 among the 250 insane inmates of the building In another insane asylum 2 bacilli carriers were found In both institutions, after isolation of the discovered bacilli carriers, the disease has ceased to be endemic

122. **Relations Between Tetany and Sexual Apparatus**—Cross summarizes what has been written on this subject and relates a case from his own experience in which attacks of tetany could be induced by stimulating the puerperal uterus to contract The patient was a woman of 39, the uterus had been curetted after abortion at the fifth week. In 2 other cases the attacks of tetany occurred during a pregnancy In both these cases, and in some others in the literature, the coincidence of bilateral incipient cataract is mentioned

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers

DISEASES OF WOMEN A Handbook for Students and Practitioners. By J Bland Sutton F R.C S Surgeon to the Middlesex Hospital and Senior Surgeon to the Chelsea Hospital for Women and A E. Giles, B Sc. F R.C S, Surgeon to the Chelsea Hospital for Women and Gynecologist to the Tottenham Hospital Fifth edition, with 129 illustrations Cloth. Pp 536 Price, $3 25 New York Rebman Company, 1906.

ENTERIC FEVER IN INDIA, and in Other Tropical and Sub Tropical Regions. A Study in Epidemiology and Military Hygiene By E Roberts, M.B D P H, Formerly Deputy Sanitary Commissioner Northwest Provinces lately Statistical Officer to the Government of India in the Medical and Sanitary Departments etc. Cloth. Pp 571. Price, 21s net. London Bailliere, Tindall and Cox, 1906.

A TEXT-BOOK OF ELEMENTARY ANALYTICAL CHEMISTRY, Qualitative and Volumetric. By J H Long M S, Sc.D, Professor of Chemistry and Director of the Chemical Laboratories in the Northwestern University Medical School. Third edition revised and enlarged. Cloth Pp 299 Price, $1 25 net. Philadelphia P Blakiston s Son & Co, 1906

UEBER EIN ZUVERLASSIGES HEILVERFAHREN BEI DER ASIATISCHEN CHOLERA SOWIE BEI SCHWEREN INFEKTIÖSEN BRECHDURCHFALLEN und ueber die Bedeutung des Bolus (Kaolins) bei der Behandlung gewisser Bakterienkrankheiten von Dr Julius Stumpf. Mit I Tafel Paper Pp 62 Price, 1.90 mk Würzburg Germany A Stuber s Verlag 1906.

STÖHR'S HISTOLOGY, Arranged on an Embryologic Basis By F T Lewis, Assistant Professor of Embryology at the Harvard Medical School. From the Twelfth German edition, by P Stöhr Sixth American Edition, with 450 illustrations. Cloth. Pp 484 Price, $3 00 net. Philadelphia P Blakiston s Son & Co, 1906

TREATMENT OF SYPHILIS By A. Fournier Professor at the Faculty of Medicine Member of the Academy of Medicine Physician to the St. Louis Hospital Paris, English Translation second edition revised and enlarged by C. F Marshall M.D Cloth. Pp 528 Price, $5 00 New York Rebman Company 1906

ELEMENTARY MANUAL OF REGIONAL TOPOGRAPHICAL DERMATOLOGY By R. Sabouraud Director of the City of Paris Dermatological Laboratory St. Louis Hospital English Translation by C F Marshall Cloth. Pp 570 Price $5 00 New York Rebman Company 1906

TRANSACTIONS OF THE NEW HAMPSHIRE MEDICAL SOCIETY at the One Hundred and Fifteenth Anniversary held at Concord May 17 18 1906 Cloth. Pp 256 Concord N H Ira C. Evans, Printer 1906

THE FACE HAIR AND SCALP Their Care and Treatment, also Facial and Scalp Massage. By Carl Rosen Cloth Pp 158 Price $1 00 Chicago Monarch Book Company

CONFERENCES OF THE MORAL PHILOSOPHY OF MEDICINE. Prepared by An American Physician Cloth Pp 368 Price $1 50 New York Rebman Company, 1906

GREEN'S ENCYCLOPEDIA AND DICTIONARY OF MEDICINE AND SURGERY Vol II Bre-Ear Cloth Pp 528 London William Green & Sons.

NEW PATENTS

Recently granted patents of interest to physicians

831592	Gynecologic appliance. Joseph H Ballard, Vancouver B C.
831711	Massage device B S Dean Philadelphia.
831873	Apparatus for purifying natural water Frank Julian St. Paul Minn.
831720.	Device for rolling bandages. Louis Long Buchanan N Y
831728	Anesthetic holding and dispensing apparatus James R. Maxfield and S B Maupin Grand Saline Kan
831733	Sleeping bag Henry E Moore Brookline, Mass
831623	Inhaler Frank B Murphy Logansport, Ind
831812	Pasteurizing Henry E. Weber Canton, Ohio
831813	Pasteurizing apparatus Henry E. Weber Canton Ohio
832032	Stethoscope C R. C Borden Brookline Mass
832201	Dilator Samuel L Kistler Los Angeles Cal
832346	Invalid bed support. Eva S Stewart, Port Arthur Ont Canada.
832517	Device for lifting invalids George B Wilt, Marion Ind
833120	Anatomic brace for the cure of flat foot. G E Buell, Rochester N Y
832851	Artificial leg G A Erickson Minneapolis
832013	Ankle corset. Gustave Krieger New York
832680	Surgeon s operating table Florus F Lawrence, Columbus Ohio
833136	Surgical implement. Alfred Littauer Brooklyn
832618	Dropper John McNally Queensland Australia
832621	Sticking plaster Franz L. Piro Rodelheim Germany
833103	Inhaler Wm. T Wood Nashville Tenn
833609	Spittoon or sanitary receptacle J P R de Britto Rio de Janeiro
833611	Surgical appliance F W Brown New York

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Original Articles

THE UTILIZATION OF THE BROAD LIGAMENTS IN COMPLETE DESCENT OF THE UTERUS, HYSTEROMYOMECTOMY AND REMOVAL OF UTERINE APPENDAGES *

E C DUDLEY, A M, M.D
CHICAGO

END-TO-END APPROXIMATION OF THE BROAD LIGAMENTS IN A NEW OPERATION FOR COMPLETE DESCENT WITHOUT REMOVAL OF THE UTERUS

In place of vaginal hysterectomy and other operations so often performed for complete descent of the uterus, I propose a new operation, the essential factor of which is the utilization of the broad ligaments as supports of the pelvic floor without removal of the uterus, but before entering on a description of this operation it may be well to outline briefly the mechanism of complete descent and to set forth some of the reasons why the older operations frequently have proved inadequate In so doing I shall draw freely on my own writings without giving further credit

I desire at the outset to disclaim any proposition that the uterus is supported and held in place by ligaments alone, it is supported by the whole pelvic floor, of which it is a part In saying that the broad ligaments are utilized, I mean always that these ligaments and their adjacent structures are utilized

Mechanism of Descent—The uterus in its normal position lies transversely across the pelvis, the fundus pointing in a slightly upward anterior direction and the cervix in a slightly downward posterior direction The long axis of the uterus in this normal direction makes an acute angle with the long axis of the vagina which extends obliquely, not vertically, from the vulva upward and backward in the direction of the hollow of the sacrum Accordingly, mobile anteversion with some degree of anteflexion is the normal position of the uterus, at any rate, the uterus in its normal range of movements does not deviate, unless temporarily, beyond the limits of a certain normal anteversion and anteflexion

The practical significance of this acute angle between the axis of the uterus and vagina in the etiology and treatment of descent is very great because the uterus in the act of prolapse usually descends through the vaginal canal in the direction of that canal i e a coincidence of the two axes is a prerequisite to descent Since an essential condition of descent is a coincidence of the two axes it follows that one factor at least in the treatment of descent must be to restore the normal angle between the axes

The mechanism of descent also has an important bearing on the treatment and, therefore, may be mentioned in detail as follows In labor the anterior wall of the vagina is so depressed, stretched and shortened by the advancing child that during and after the second stage the anterior lip of the cervix uteri may be seen behind the urethra This location of the cervix, so close to the anterior wall of the pelvis, necessarily involves great stretching of the uterosacral supports which normally hold the cervix uteri and, together with it, the upper extremity of the vagina close to the hollow of the sacrum This function of the postuterine ligaments having been temporarily impaired, the upper extremity of the vagina is displaced forward so that after delivery the uterus having sufficient space between itself and the sacrum, instead of maintaining its normal anterior position, may fall backward into retroversion and thereby bring its own axis into line with the direction of the vagina

If the puerperium progress favorably with prompt involution of the pelvic organs and if the relaxed vesicovaginal wall and other parts of the pelvic floor, especially the uterosacral supports and the broad and round ligaments, recover their normal tone, then the whole pelvic floor, including the uterus, resumes its normal relations But if the enlarged heavy uterus remain in the long axis of the vagina, and especially if the fundus uteri be incarcerated under the promontory of the sacrum with the sacral supports stretched so much and for so long a time that they can not recover their contractile power, and if normal involution of the pelvic organs be arrested, then the descent may not only persist, but may progress with constantly increasing cystocele and rectocele until the entire uterus has extruded through the vulva

It is most important to remember that complete prolapse of the uterus is only an incident to prolapse of the pelvic floor The whole mechanism is that of hernia and the condition is hernia for the extruded hernial mass drags after it a peritoneal sac which hernia-like contains small intestine This sac forces its way to the pelvic outlet and extrudes through the vulva, having the inverted vagina for a covering

The above mechanism would suggest at once shortening of the uterosacral ligaments to draw the cervix uteri back to its normal location near the hollow of the sacrum and shortening the round ligaments to draw the corpus forward so as to restore the normal direction of the uterine axis These procedures might be curative in cases of retroversion or retroflexion without great descent, but when not only the uterus, but also the whole pelvic floor, are in extreme downward hernial displacement the uterosacral and round ligaments even though shortened, do not have sufficient power to give permanent support The strain on them [illegible] gre[illegible]t they are apt to stretch out and permit the descent to recur Adequate sustaining power under the uterus is now essential Shortening the uterosacral and round ligaments, however, may in some cases be indicated as a supplementary operation

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* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association at Boston June 1906

Frequently the change in the direction of the vagina from the normal oblique to the abnormal vertical is still further increased by injury to the vaginal outlet, the perineum may be torn in any direction and, what is more serious, it may be torn away from its pubic attachments, and in this way may be displaced backward toward the tip of the coccyx, in fact, such displacement is so common as a result of injuries to the perineum as to suggest the propriety of a change in the terminology from laceration to displacement of the perineum The upper extremity of the vagina being displaced forward and the lower extremity backward, and the direction of the overstretched, dilated vagina now being vertical, the heavy uterus, having its long axis in the same direction as that of the vagina, has all the conditions favorable to progressive descent.

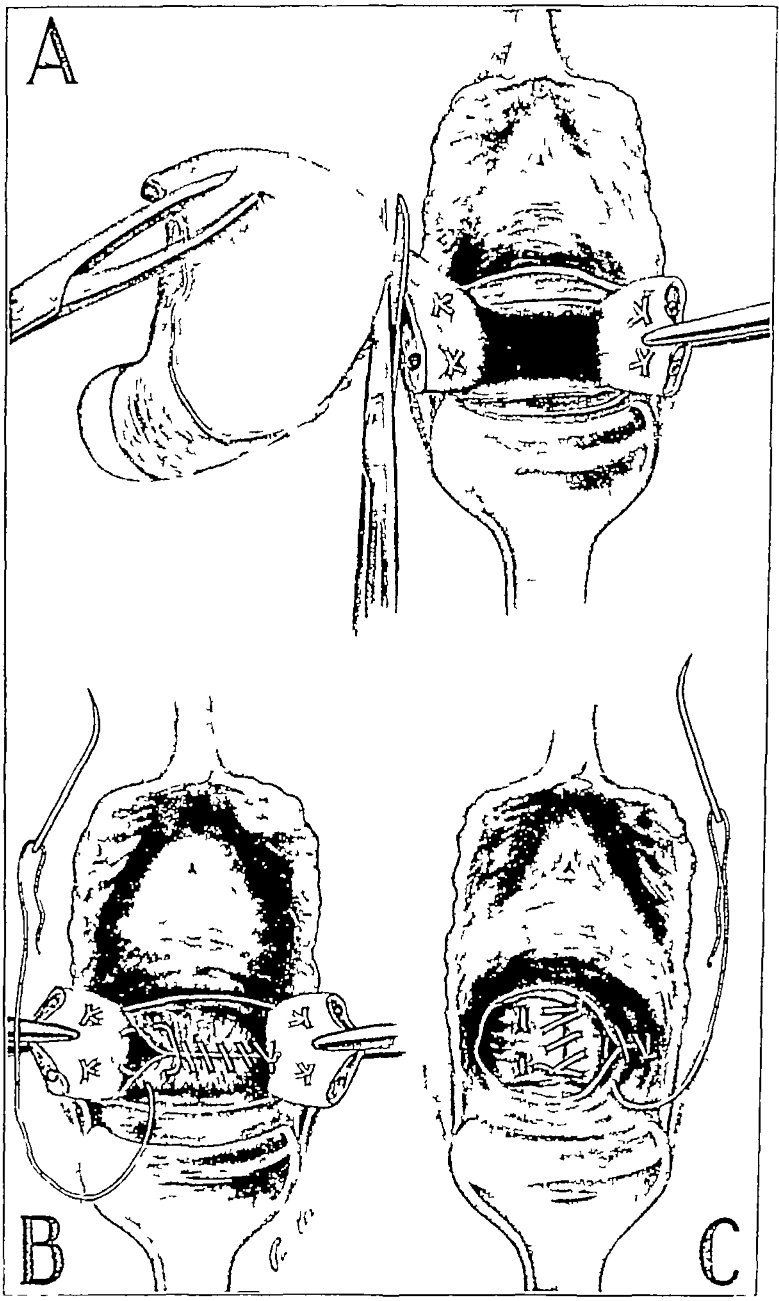

Fig 1 —Vaginal Hysterectomy A. Incisions have been made from the posterior vaginal fornix to the cul-de-sac of Douglas and from the anterior vaginal fornix to the utero-vesical cul-de-sac. The uterine and ovarian arteries in both ligaments have been securely ligated The left ligament has been cut away from the uterus and is drawn to the vulva and held by forceps The uterus has been drawn through the vulva and is hanging by a shred to the right ligament from which it is being cut away The wound made by the removal of the uterus with its peritoneal and vaginal margins shows between the ligaments

B The last stitch of a continuous catgut suture is being taken to unite the peritoneal margins of the wound The line of suture thus made runs from one ligament to the other and at either end includes the ligament Closure of the peritoneum as here shown is nearly complete

C The ends of the broad ligament are shown to be united in front of the peritoneum by means of a continuous catgut suture Another suture is closing the vaginal margins of the wound by a line of union running across the upper end of the vagina from side to side When this suture is complete the united broad ligaments will lie between peritoneum and vaginal wall and must necessarily sustain the rectum vagina and bladder on the health level

It is clearly most important to appreciate the fact that, since in nearly every case of procidentia the lower extremity of the vagina is displaced backward, with associated subinvolution of the pelvic floor and especially subinvolution or rupture of the perineum or of some other portion of the vaginal outlet, therefore the posterior wall of the vaginal outlet and the perineum must be brought forward to their normal location under the pubes so as to give support to the anterior vaginal wall, otherwise, whatever the operation on the vaginal walls and broad ligaments, the vagina will fall again, will drag the uterus after it, and the hernial protrusion (cystocele, rectocele and prolapse) will be reproduced

The treatment, therefore, of procidentia must always include an adequate operation on the perineum, or, more comprehensively speaking, on the posterior wall of the vaginal outlet The operation must be performed so that it will carry the lower extremity of the vagina forward to the normal location close under the pubes, for in no other way can the normal oblique direction of the vagina be secured

Reasons for Failure of the Older Operations — In passing it may be well to mention, for the purpose of condemning it, an operation perhaps more frequently performed than any other for the cure of complete descent, namely, the operation which generally passes under the name of Stoltz This operation is designed to narrow the vagina, and thus to maintain the uterus somewhere in the pelvis above the constriction Operations of this class usually consist of the removal of an elliptical piece from the anterior or posterior vaginal wall, or from both, and closing the exposed surfaces by means of purse-string sutures No effort is made to restore the normal axes of the uterus and vagina The whole purpose is to make the vagina so narrow that the uterus can not pass through it Such operations generally fail, because they leave the uterus and vagina in the same axis and because the restricted vagina can not resist the downward force of the uterus, which almost invariably dilates the vagina a second time and forces its way through with reproduction of the hernia Moreover, the operation always does permanent harm, because it shortens the vagina, thereby making it draw the cervix away from the sacrum toward the pubes so that the body of the uterus may have room to fall backward to the position of incurable retroversion We may without discussion perhaps throw out all operations belonging to the Stoltz group The same may be said of all plastic operations in which the vaginal surfaces are exposed by superficial denudation and brought together by sutures, even though some of these operations are correct in principle so far as they aim to force the cervix uteri backward into the hollow of the sacrum

The older plastic operations of elytrorrhaphy having been followed so frequently by partial or complete recurrence of the descent, many operators, especially in women who have passed the menopause, substitute the mutilating operation of vaginal hysterectomy for the unsatisfactory operations of superficial elytrorrhaphy Complete prolapse, being hernia, should be treated, as pointed out by Reynolds and others, according to the established principles of herniotomy by reducing it and then excising the sac in such a way as to expose strong fascial surfaces which should be firmly united by sutures The absurdity of treating any other hernia by superficial denudation and reefing or tucking in the surfaces by sewing them together must be apparent to anyone

An efficient operation on the vaginal walls should have for its object, not narrowing the vagina, but restoring the normal direction of it with a double purpose, first, so that the upper extremity, together with the cervix uteri, shall be in its normal location within an inch of the second and third vertebræ, just where the uterosacral ligaments would hold it if their normal tonicity and integrity could be restored, and, second, so that the lower extremity of the vagina shall be brought forward against the pubes The fulfillment of these two indications by restoring the normal obliquity of the vagina will hold the cervix uteri so far back toward the sacrum that the corpus uteri must be directed forward in its normal anterior position of mobile equilibrium With these conditions secured, the uterus being at an acute angle with the vagina and having little space posteriorly, can not retrovert and turn the necessary corner which would permit it to prolapse in the direction of the vaginal outlet To accomplish this, perineorrhaphy already has been declared necessary as a means of forcing the lower end of the vagina toward the pubes

Before describing the proposed operation I would repeat the fact that the various plastic operations on the vaginal walls (elytrorrhaphy) have proved so unsatisfactory that many surgeons are inclined to abandon them and to adopt the radical measure of vaginal hysterectomy in their place This operation however if performed by the familiar method of ligating the broad ligaments cutting them from the uterus and then letting them retract to the sides of the pelvis is inadequate because the ligaments thus retracted can not perform their functions of holding up the pelvic floor, consequently many hysterectomies performed in this way have been followed by a continuance of the downward displacement of the rectum vagina and bladder a condition not materially improved by the mere absence of the uterus In order to utilize the normal supporting power of the ligaments, I devised and in 1902 published an operation by which the severed ligaments were approximated end to end between the peritoneal and vaginal sides of the wound made by the removal of the uterus I again present the operation unmodified, because I desire to make use of this principle of end-to-end approximation in the new procedure for the surgical treatment of complete descent of the uterus, a description of which will follow Figure 1 will serve to illustrate the treatment of the broad ligaments by end-to-end approximation in vaginal hysterectomy

Proposed Operation on the Broad Ligaments and Excision of the Cystocele—To appreciate the part which the broad ligaments properly may have in a correct operation, it is only necessary to observe the fact that vaginal hysterectomy as above described results in holding up the pelvic floor and with it the rectum, vagina and bladder, because in this operation the broad ligaments are fixed to the vaginal wound Since the condition of procidentia is hernia not alone of the uterus, but of the rectum, vagina and bladder as well, let us try to hold up the pelvic floor, including the uterus, by similar means, even though the uterus be not removed

Following the suggestion of Emmet Sims, Reynolds and others who have striven to draw structures in the neighborhood of the lower margins of the ligaments in front of the cervix for the purpose of forcing it back, I found myself stripping the structures more and more from the sides of the uterus and drawing them in front of it but not until I actually severed a considerable portion of each ligament from the sides of the uterus did I secure the best results In future operations I shall emphasize that part of the procedure as shown in the drawings more than I have done yet Figures 2, 3 4, 5, 6, 7, 8, 9 and 10, with their legends, will illustrate the proposed method of holding up not only the uterus, but also the rectum, vagina and bladder by end-to-end approximation of the broad ligaments and adequate excision of the cystocele, without removal of the uterus

In addition to approximation of ligaments, it must be borne in mind that other supporting structures also are brought together in front of the cervix uteri, notably the adjacent parametric structures, and if the operation is sufficiently extensive, the round ligaments In extreme cases it would be well to separate the bladder entirely from the cervix uteri, as would be done in vaginal section, so as to expose the round ligaments These ligaments then could be brought down in front of the cervix and included in the sutures which are used to approximate the cut ends of the broad ligaments Such adjustment of the broad and round ligaments, together with the adjacent parametria in front of the cervix, necessarily would give great strength to the pelvic floor

The question frequently has been asked whether in cutting away the lower halves of the broad ligaments troublesome hemorrhage is not encountered I should fear such hemorrhage if the ligaments were severed with the uterus in its normal location but would not fear it with the uterus outside the body Besides since a shaving is removed from each side of the uterus, the incision usually would be safely inside the utero-ovarian anastomosis At any rate, the uterus being outside the body hemorrhage could be controlled easily if it did occur

I ask a trial for this operation, in the hope that it will prove more effective than the more superficial elytrorrhaphy, which, in a de[illegible]e, has been [illegible]satisfactory At least, it will [illegible] ting th[illegible]ernative operation (S[illegible]

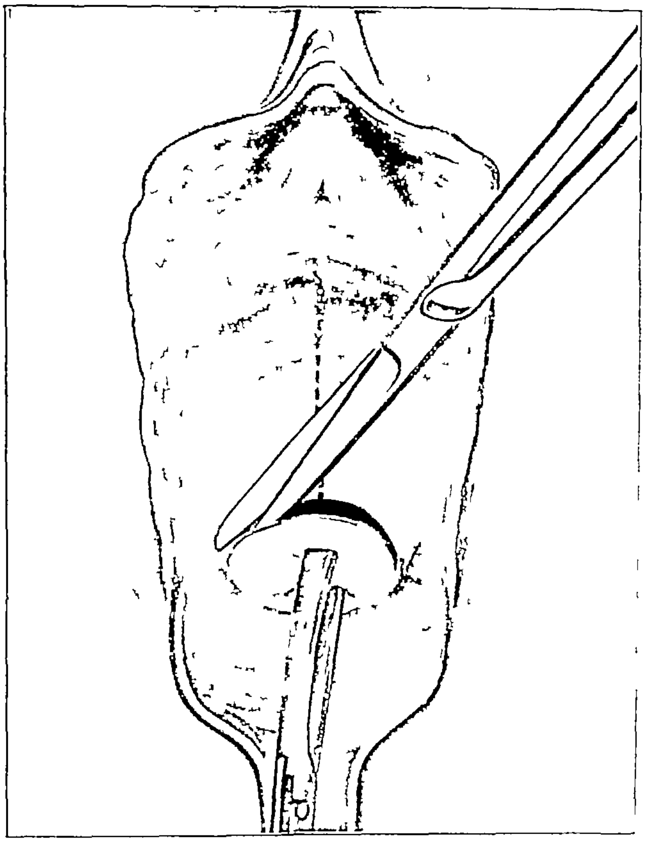

Fig 2 —Broad Ligament Operation for Complete Descent of the Uterus —Cervix held steady by flat vulsellum forceps The bladder lies in front of the prolapsed uterus The dotted line extending in the median direction on the anterior wall of the cervix from a point at the uterovaginal attachment to the urethrovaginal wall mark (Figure 4) the direction of an incision to be made by means of sharp pointed scissors through the vaginal layer of the vesicovaginal septum The incision extending around the anterior half of the cervix at the uterovaginal attachment is made through the vaginal wall to but not into uterine tissue

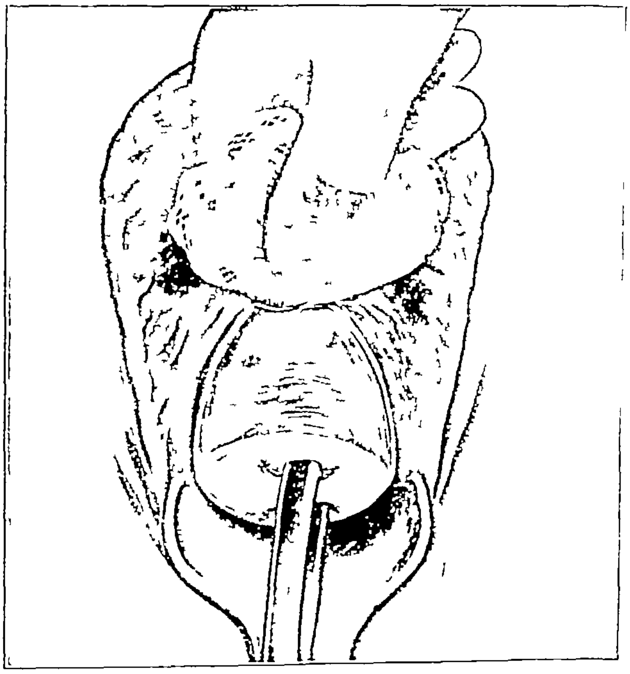

Fig 3 —Broad Ligament Operation for Complete Descent of the Uterus —Bladder being stripped from uterus by blunt dissection which is accomplished readily and quickly by sponge pressure and is continued to the peritoneal reflexion of the vesico-uterine pouch precisely as it would be if the operator were going to open into the peritoneal cavity between the uterus and bladder Observe here just beneath the sponge the translucent peritoneum which for the present purpose is not usually to be incised.

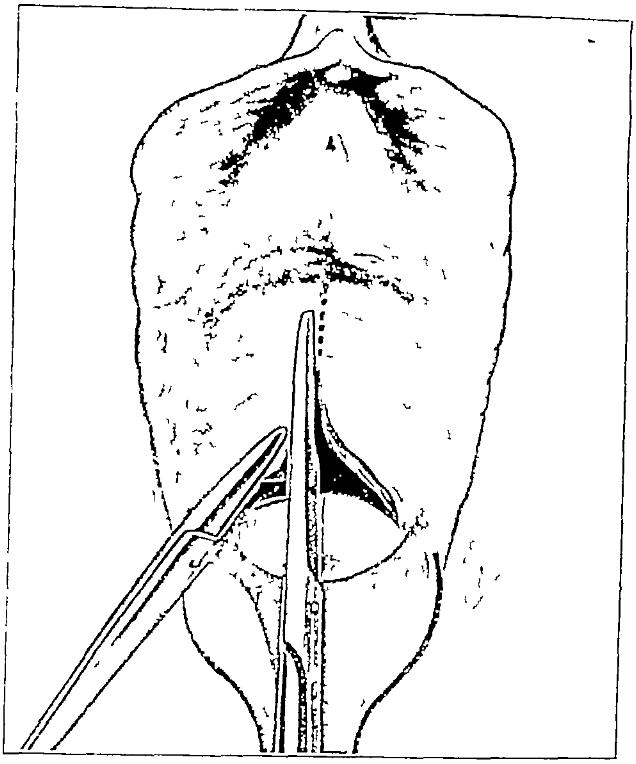

Fig 4 —Broad Ligament Operation for Complete Descent of the Uterus —The bladder has been stripped off uterus and the peritoneum exposed (Figure 3) the vesicovaginal septum is drawn down over the anterior uterine wall by a forceps and the vaginal layer of the septum is being split on the median line with scissors

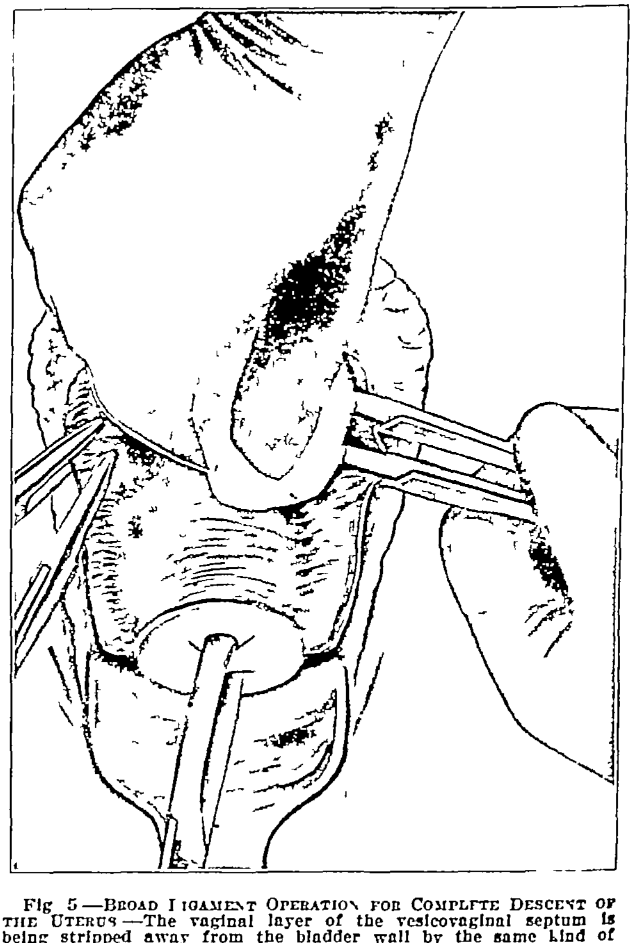

Fig 5 —Broad Ligament Operation for Complete Descent of the Uterus —The vaginal layer of the vesicovaginal septum is being stripped away from the bladder wall by the same kind of blunt dissection used in Figure 3 The bladder as it is separated is pushed up out of sight.

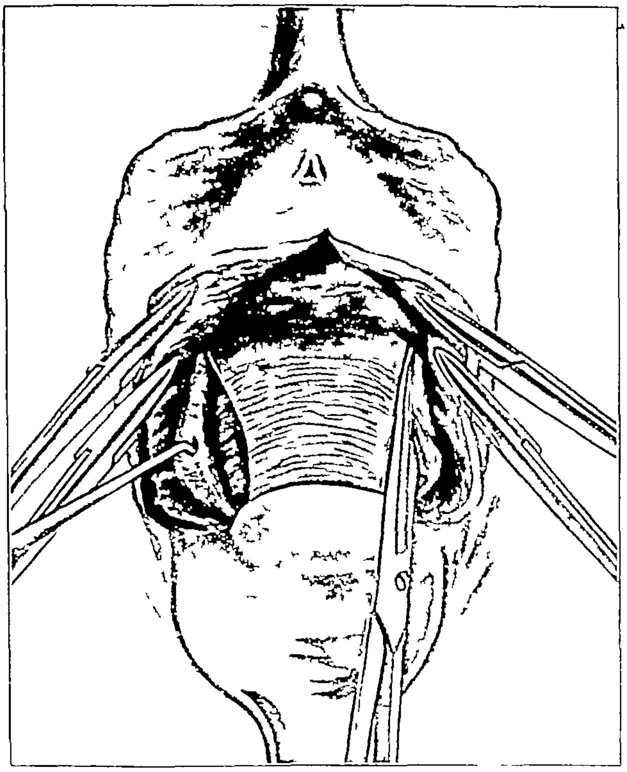

Fig 6—Broad Ligament Operation for Complete Descent of the Uterus—The lower two-thirds of each broad ligament and to avoid wounding the utero-ovarian anastomosis, a thin shaving of the cervix is being cut away with sharp pointed scissors The right ligament has been severed and the left is being severed The redundant vaginal layer (cystocele) which has been stripped off from the bladder is held by forceps out of the way to either side

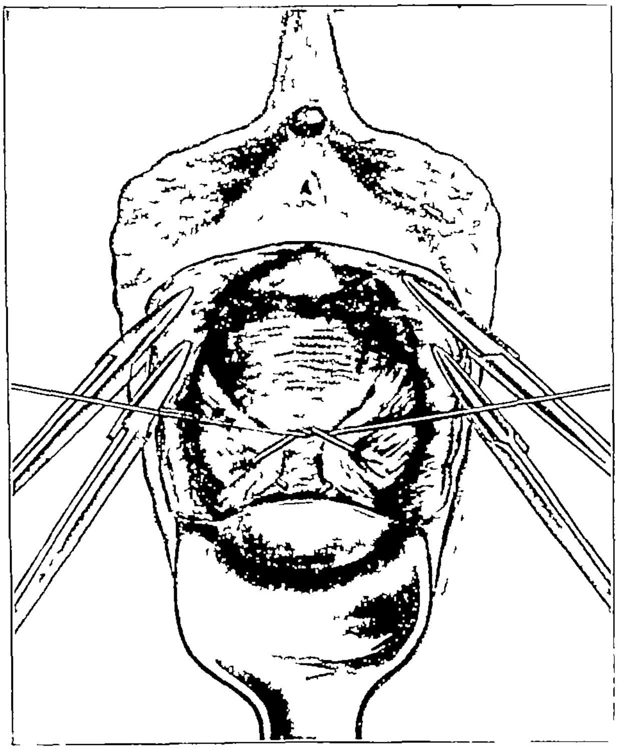

Fig 7—Broad Ligament Operation for Complete Descent of the Uterus—The severed lower two-thirds of the broad ligaments are being approximated end to end by catgut sutures First suture in place and being drawn tight These ends as they are drawn together already are forcing the cervix back.

As already explained, the cut ends of these ligaments when united pull down together with them the adjacent parametric structures and in extensive operations also the round ligaments Too tight tying is apt to strangulate the tissues cause the sutures to cut out and prevent union Number one or two chromic catgut ordinarily is used Silkworm gut is better but difficult to remove

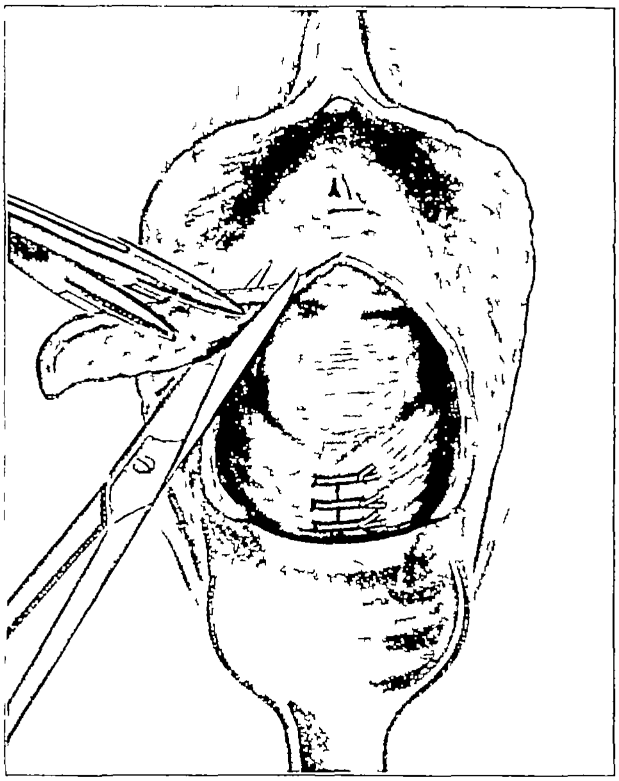

Fig 8—Broad Ligament Operation for Complete Descent of the Uterus—The lower two-thirds of the severed broad ligaments have been united end to end by catgut sutures, thus forcing cervix still further back The redundant vaginal wall (cystocele) has been cut away on the right and is being cut away on the left

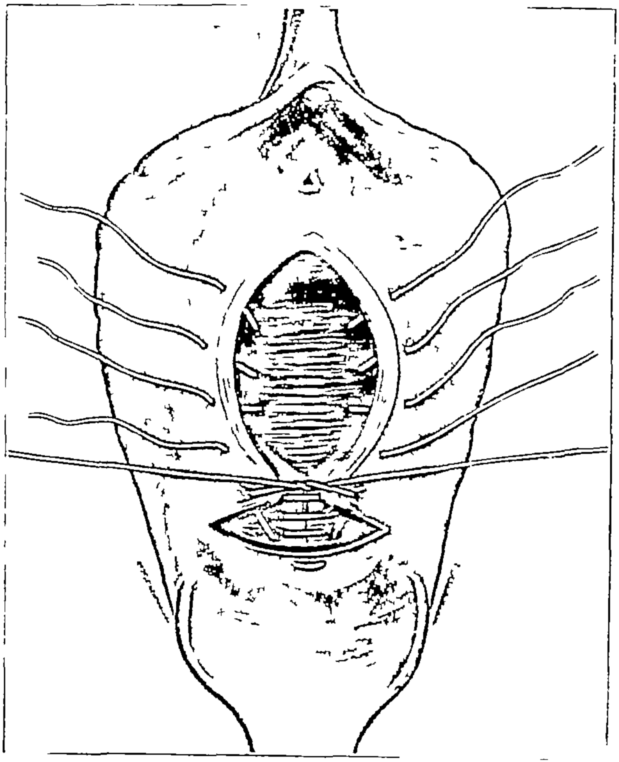

Fig 9—Broad Ligament Operation for Complete Descent of the Uterus—The severed ends of the broad ligament having been united in front of cervix and the cystocele excised the cut edges of the vaginal wall are being approximated from side to side The first suture which is being drawn tight shows how the margins are approximated near the cervix The other sutures show the method of union between this first suture and the others which are introduced but not tied *Observe that these sutures all catch up the uterine wall thus forcing the bladder up so that it can not come down again between the uterus and the vagina This forcing up the bladder is a very essential factor in the success of the operation*

END-TO-END APPROXIMATION OF THE BROAD LIGAMENT IN SUPRAVAGINAL AND COMPLETE HYSTEROMYOMECTOMY

The older operation of hysteromyomectomy, by which the broad ligaments were ligated and permitted to retract to the sides of the pelvis was, in many cases, unsatisfactory because the ligaments thus retracted could no longer contribute their part to holding up the pelvic floor and because consequently the operation often was followed by descent of the rectum, vagina and bladder to the vulva and in some instances outside the vulva The purpose of end-to-end approximation is to utilize the ligaments in the performance of their normal sus-

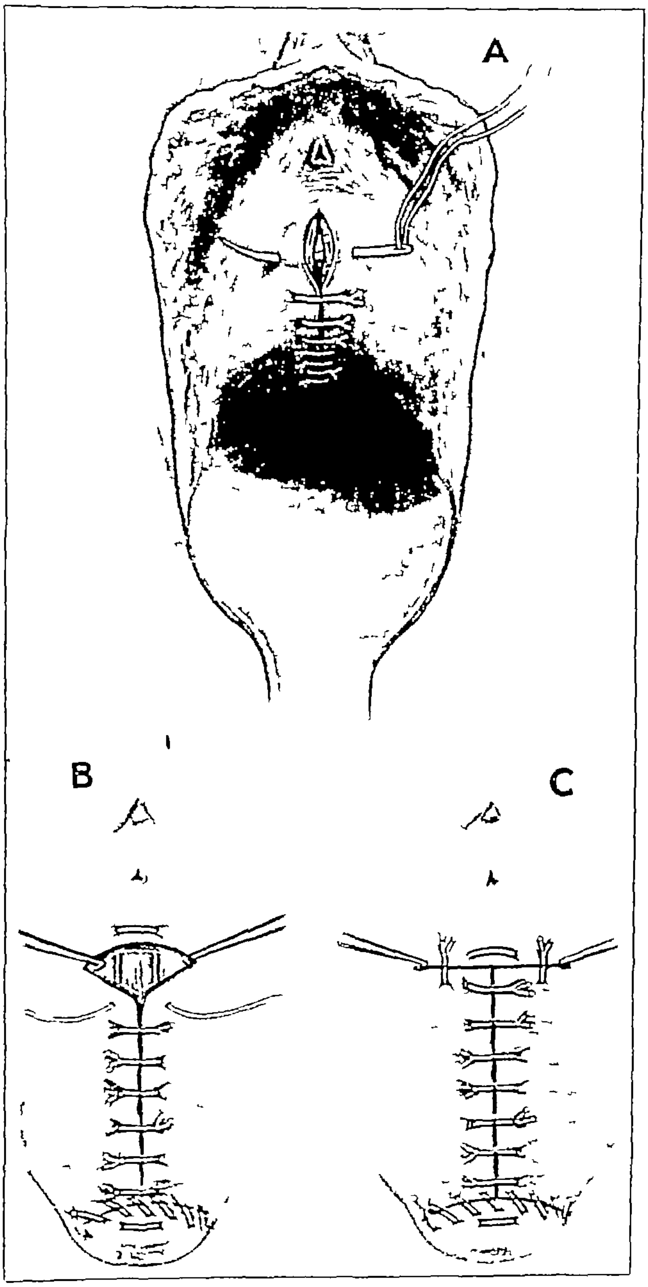

Fig 10—BROAD LIGAMENT OPERATION FOR COMPLETE DESCENT OF THE UTERUS—The redundant vaginal wall having been removed (Figure 8) the lateral margins of the vaginal wound are being united by interrupted sutures As the result of this union the cervix and upper end of the vagina have been forced back to their normal location in the hollow of the sacrum *B and C show the lines of* union complete At the urethral end of the wound the redundant vaginal wall can not be disposed of always by a median line of union It may be necessary as shown here to unite that part in a direction at right angles to the main line of union Traction is being made by tenacula at each end of this transverse line of union The cervical lines of union also have the T shape

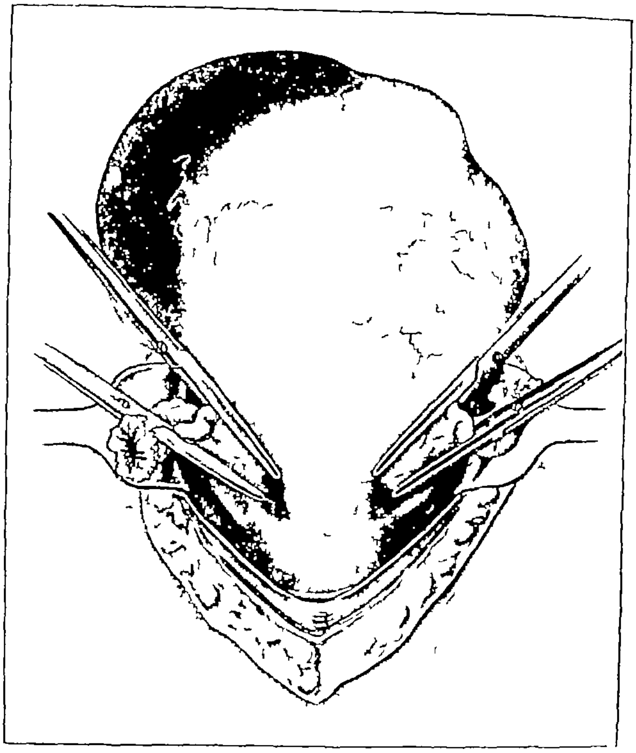

Fig 11—SUPRAVAGINAL HYSTERECTOMY—Median incision. Abdominal wound held apart by retractor Myomatous uterus delivered through the wound Broad ligament on either side clamped by two long forceps preparatory to supravaginal amputation of the uterus. Cervix uteri between tips of forceps Bladder in front.

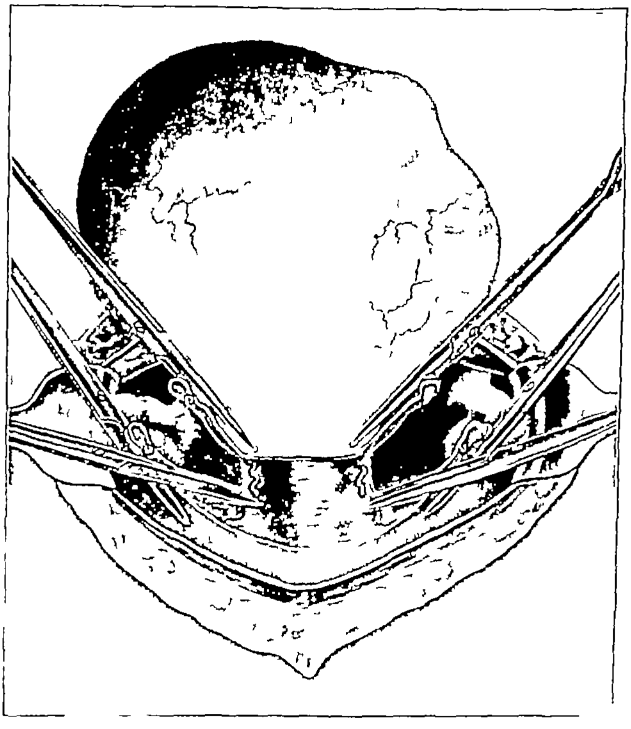

Fig 12.—SUPRAVAGINAL HYSTERECTOMY—Semi-diagrammatic. A transverse incision has been made in front of the cervix uteri at the vesical reflexion each end terminating where the broad ligament joins the uterus A similar incision has been made through the peritoneum on the posterior wall of the uterus but on a line *rather higher than the one on the front. The bladder has been* stripped away from the cervix as far down as possible by the same kind of sponge pressure as shown in Figure 3 The posterior peritoneum has been stripped down toward the vaginal portion of the cervix in the same manner The broad ligament has been divided on either side between the forceps and the utero ovarian anastomosis has been clamped by an additional forceps

taining functions I published the essential principle of this operation in 1902, and here present it again in order to set forth certain modifications in technic

Supravaginal Hysteromyomectomy Without Drainage — Figures 11 to 16, with their legends, will explain the operation of supravaginal hysteromyomectomy as

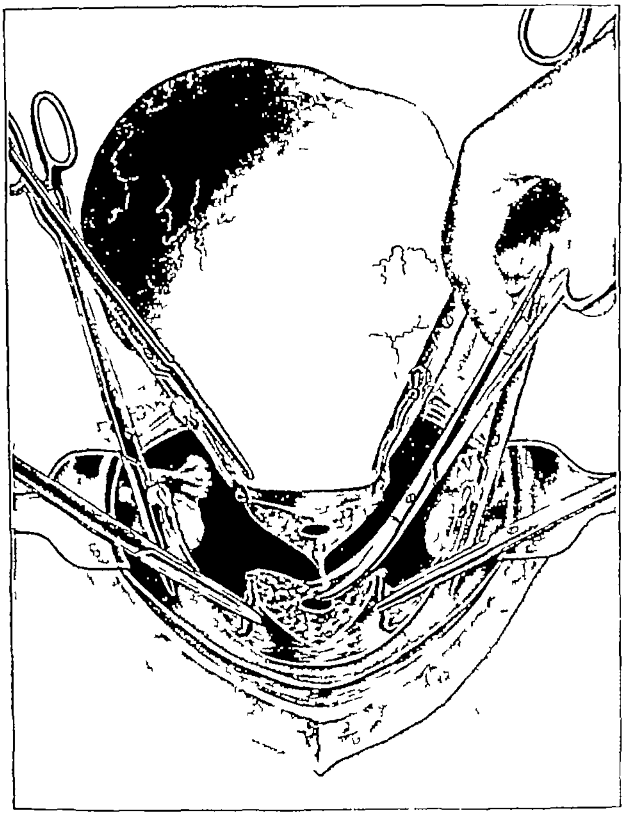

Fig 13 —SUPRAVAGINAL HYSTERECTOMY Semi-diagrammatic. The myomatous corpus uteri is being cut from the cervix by means of scissors. Observe the triangular incision is directed not in the lateral but in the anteroposterior direction The tumor having been removed the next step will be to secure the uterine and ovarian arteries by means of catgut ligatures on either side. This having been done the forceps are to be removed. The broad ligaments and the two sides of the cervical stump are then to be brought together

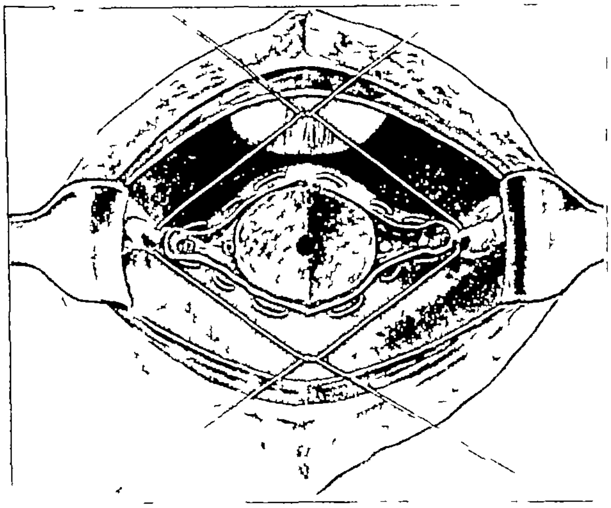

Fig 14 —SUPRAVAGINAL HYSTERECTOMY Semi-diagrammatic. Looking down on the cervical stump and severed broad ligaments instead of looking at the anterior wall of the cervix as in Figure 13 Uterine and ovarian arteries secured by ligature Two running catgut sutures catching up the peritoneal covering of the cervical stump and of the broad ligaments one anterior and one posterior to the cervix and broad ligaments have been passed in such a manner that when tied they will draw into apposition the two lateral surfaces of the cervical stump and will unite the ligaments end to end.

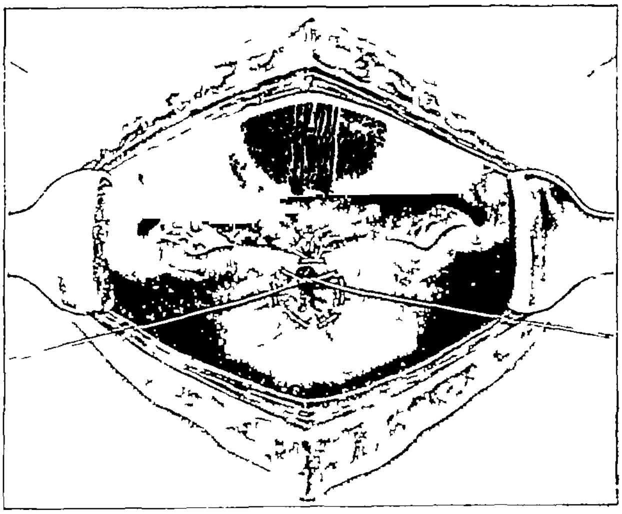

Fig 15 —SUPRAVAGINAL HYSTERECTOMY Semi-diagrammatic. The posterior continuous suture shown in Figure 14 has been drawn taut and tied. The anterior suture is being drawn taut preparatory to tying

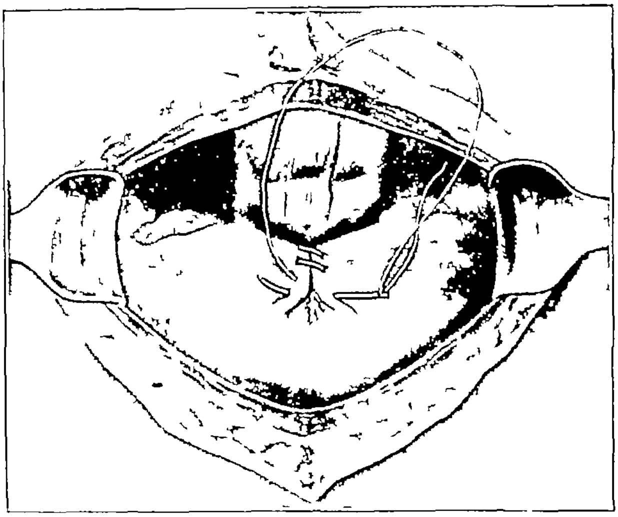

Fig 16 —SUPRAVAGINAL HYSTERECTOMY Semi diagrammatic. The broad ligaments having been drawn together as shown in Figure 15 the approximation is completed by an additional running catgut suture beginning at the lower end of the line of union on the posterior side of the united ligaments and continuing over the edge of the ligaments down on the anterior surface to the bladder This completes the closure of the pelvic wound

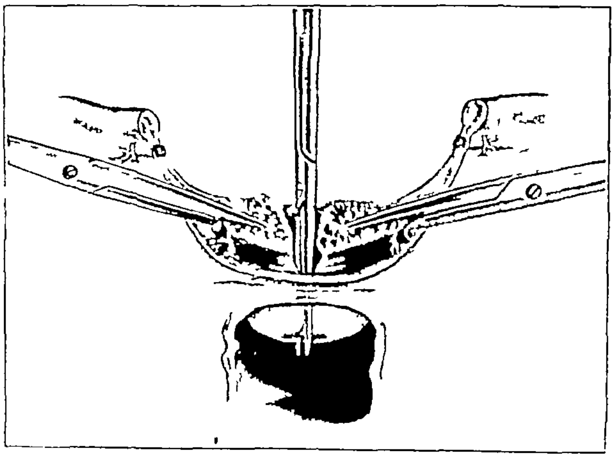

Fig 17 —SUPRAVAGINAL HYSTERECTOMY The corp[illegible] uteri has been removed, as shown [illegible] 13 [illegible] ovarian arteries [illegible] tie [illegible] T [illegible] being held up [illegible] ly into [illegible] to

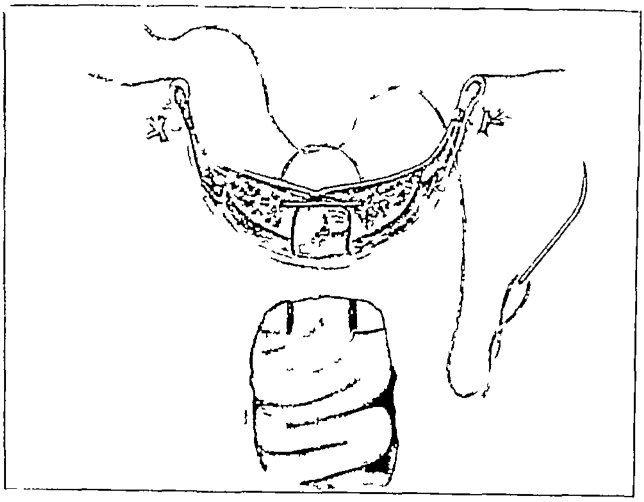

Fig 18.—Supravaginal Hysterectomy Semi diagrammatic. The cervix having been divided or dilated as explained in the legend of Figure 17, a short strip of gauze is introduced from above downward into the vagina The two fragments of the cervix and the cut ends of the broad ligaments are then ready to be united by sutures The first suture is introduced but not tied The operator may use the same form of suture as shown in Figures 14 15 and 16, or may adopt any other form which the case may require

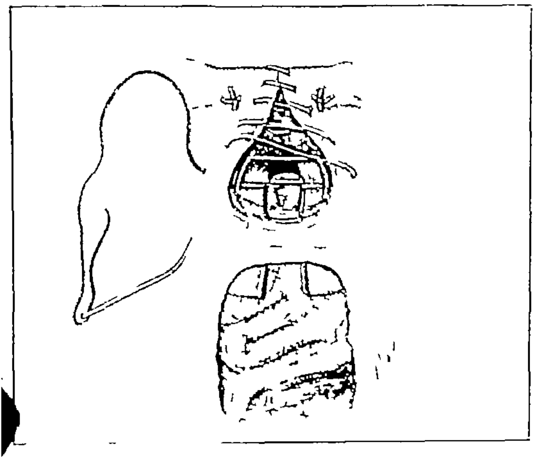

Fig 19.—Supravaginal Hysterectomy Semi diagrammatic Continuation of Figure 18 Vaginal gauze drain End to end approximation of the broad ligaments by continuous suture This suture is here intended to suggest a method of closure Other forms of suture and methods of closure are permissible

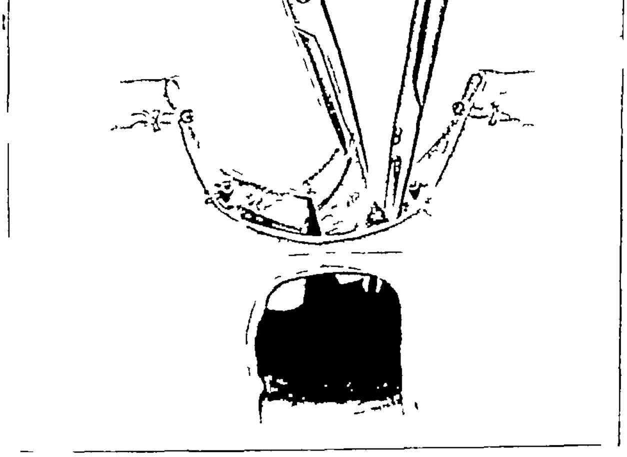

Fig 20.—Complete Hysterectomy Semi-diagrammatic. The myomatous corpus having been removed and the cervix split, the two lateral fragments are being removed by means of scissors, care being taken to keep close to the cervix in order to avoid the ureters.

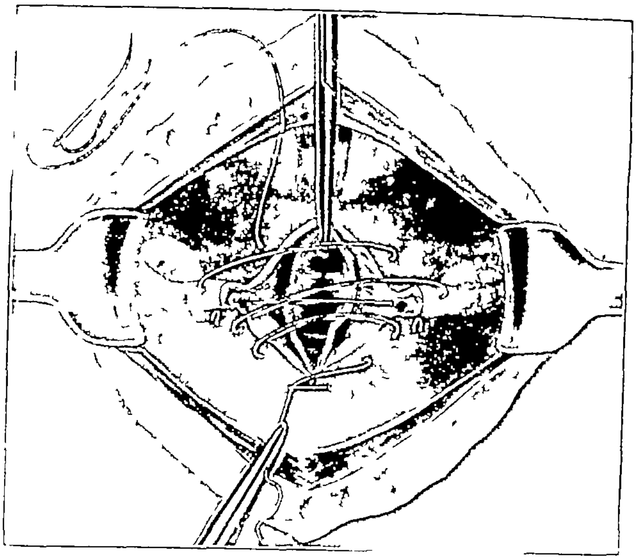

Fig 21.—Complete Hysterectomy Semi-diagrammatic. Continuation of Figure 20 The cervical stump having been removed the cut edge of the vagina is drawn up by means of forceps and included in a continuous suture which closes the upper end of the vagina against the united broad ligaments which are brought together end to end. This form of suture is here introduced to show a method of union Other forms of suture may be better suited to individual cases

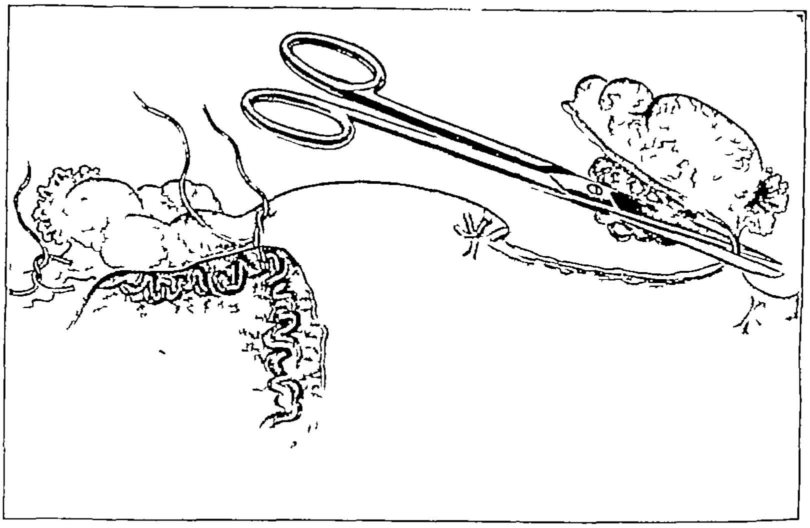

Fig 22.—Reefing of Broad Ligaments After Removal of Uterine Appendages For explanation see following page

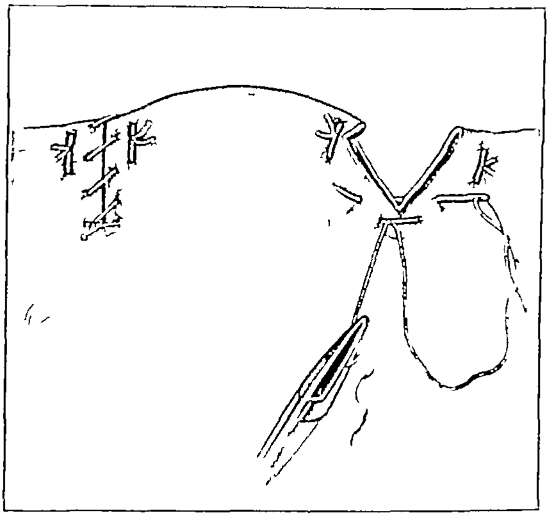

Fig 23.—Reefing of Broad Ligaments After Removal of Uterine Appendages For explanation see following page

modified from the original publication To secure simplicity, the non-essential anatomy has been omitted

Supravaginal Hysteromyomectomy with Drainage—There may be some pathologic condition in connection with the ligaments or the cervical stump which would indicate drainage so that any secretions which might form in the line of union may find their way into the vagina instead of into the peritoneum Figures 17, 18 and 19, with their legends, illustrate the operation as modified for vaginal drainage

Complete Hysteromyomectomy—If the entire uterus is to be removed, the operation will go forward as already described for the removal of the myomatous corpus uteri The cervix then may be cut out and the wound closed as shown in Figures 20 and 21

ADVANTAGES OF END-TO-END APPROXIMATION

1 The broad ligaments, in the anatomic sense, take the place of the excised uterus and form a pouch posteriorly like the cul-de-sac of Douglas, and anteriorly a depression that answers to the uterovesical pouch, thus conforming to the normal anatomy

2 The broad ligaments, thus united, together with adjacent structures, hold up the rectum, bladder, vagina and other parts of the pelvic floor, and in so doing prevent the descent of these organs which so commonly results from hysterectomy as ordinarily performed

3 The broad ligaments and adjacent structures, in occupying the space left by complete hysterectomy, prevent the intimate union of the rectum and bladder, a union which would leave only a thin wall between them, through which infection might pass from one to the other

4 The operation is performed more easily and quickly by this method than by that of transverse suturing of the wounded ligaments

5 There is, after closure, much less intraperitoneal traumatism and consequently less danger of sepsis, adhesions and secondary hemorrhage

6 The mortality of the operation in my own cases during the last four years has not risen above 1 per cent

REEFING THE BROAD LIGAMENTS IN THE REMOVAL OF THE UTERINE APPENDAGES

The old and obsolete method of ligating the broad ligaments *en masse,* cutting off the tube and ovary and then dropping the raw stump back into the pelvic cavity, although surgically crude, yet had the advantage of shortening the broad ligaments and consequently of holding up the uterus and the other parts of the pelvic floor A large proportion of the cases of removal of the appendages are complicated by backward or downward displacement of the uterus, and the displacement is apt to be increased by the modern operation of whipping over the edge of the broad ligament after removal of the appendage The right side of Figure 22 shows the cut edge of the ligament Instead of a running suture to unite the peritoneum on either side over this cut edge, I proposed, in 1902, to double it on itself and thereby to shorten the ligament. Although I have in no respect modified this operation, I venture to introduce it here both because of its effectiveness in holding the uterus in normal position and because the presentation of it completes the list of procedures in which I have been specially interested for the preservation of the functions of the broad ligaments and their adjacent structures in pelvic surgery Figures 22 and 23 will serve to illustrate the method

Figure 22 on the left side shows the anatomy of the circulation and two ligatures thrown around the ovarian artery, but not tied The right side shows diseased appendages being cut away, the ligatures having been tied so as to shut off the blood current from the artery as it emerges from the infundibulopelvic ligament and from the utero-ovarian anastomosis

Fig 23 on the right side shows the raw edge of broad ligament after removal of the appendages This ligament is being shortened by closure on itself by means of a continuous catgut suture The left side shows complete closure and folding on itself of the broad ligament

DISCUSSION

Dr. Edward Reynolds, Boston, said that if he disapproved of the proposed operation Dr Dudley knows that he would say so, but as he listened to the paper he said to himself "Dudley has struck it this time" He would not, however, do this operation in young women likely to become pregnant. But nineteen twentieths of the cases in which prolapse occurs are in women who will not again be pregnant In Dr Dudley's operation the natural supports are utilized so to fix the bulk of the support across the floor of the pelvis This will so protect the natural supports that they are not likely to be broken down

Dr. E E Montgomery Philadelphia, agreed with Dr Reynolds He does not know of any condition that gives more trouble than an extensive prolapse, and after the description of this perfect procedure one is surprised that it has been overlooked so long He has pushed off the bladder and tucked it up in order to keep it from pushing down, and then cut out a semicircular section on either side and lengthened the anterior wall of the vagina and overcome the cystocele, but this is not nearly so effective as the method mentioned by Dr Dudley

Dr R. Waldo, New York, said that if the broad ligaments hold, this operation may cure the disease, but we do not know that they will hold All surgeons have had sad experiences wherein they have stitched fibrous tissues together This does not always hold Another principle which it is very essential to remember is the necessity of holding the fundus of the uterus forward, for in procedentia one of the first things to happen is retroversion This operation will hold back the cervix Dr Waldo has operated for complete procidentia through the vagina anteriorly, bringing the fundus forward and stitching it there

Dr F J Taussig, St. Louis, said that it is as difficult to estimate the value of an operation for prolapse as it is that of an operation for uterine cancer, for in either case we have to wait three, four or five years after the operation to see if we have secured a permanent result The method of using the broad ligaments instead of the round and the uterosacral ligaments is an improvement Dr Taussig recalls having seen Mackenrodt do a similar one in 1901, and since then he notes that Mackenrodt has given up this method This method does not take into consideration the bladder We know from experience in operating for prolapse that the recurrence is usually in the shape of a cystocele, and it is to guard against this that we must strive as much as possible Seventy five per cent of these cases occur in women over 40 For these reasons the Freund Wertheim uterovaginal plastic operation, in which the uterus acts as a plug for the cystocele, should be employed Dr Taussig finds in the reports of this operation 148 cases with a return of the prolapse in 5 This certainly speaks well for the operation He believes it should receive more consideration at the hands of American surgeons

Dr. D H. Craig, Boston, thinks that any of us who have had experience in the employment of the broad ligaments as suggested some time ago by Dr Dudley, have had occasion to be well satisfied with the manner in which they have functionated in their new relationship The original causation of cystocele and other forms of descent of the vaginal wall, however, is almost invariably a laceration of the vaginal outlet, Dr Craig emphasized the nece[illegible] of a[illegible] certain other conditions early, in his opinion if all these lacerations were promptly repaired cystocele would become of historical rather than of practical interest Physiologically, the broad ligaments are required to possess enormous ability to elongate upward during pregnancy In cystocele this ability simply manifests itself in the reverse direction, and since these ligaments have once partly elongated downward as the result of abnormal conditions below them, it may be that they possess an ability to elongate still further after the operation To guard against this, operation must be done as early as possible and every item of injury to the vaginal outlet repaired. With this proviso the operation seems to Dr Craig the best yet suggested

Dr E C Dudley, Chicago, stated that he has not performed the operation in young women, because his cases had occurred in women past middle life, but he would not hesitate to do so The remarks relative to the operation of Mackenrodt, he declared, were irrelevant Mackenrodt has never published a description of this operation, nor of any operation similar to this, nor has Dr Dudley ever had any reason to think Mackenrodt ever performed it The fact that he performed some other operation and subsequently gave it up as being unfit has nothing to do with the subject In putting forth this operation Dr Dudley said that he has had constantly before his mind anatomic conditions and the utilization of anatomic structures in such a way as to make them perform their functions with the least disturbance of normal relations He emphasized the great importance of separating the bladder completely from the uterus, and pushing it up out of the way He also reiterated the opening statement of this paper that the operation does not depend wholly on the supporting power of the ligaments, but also on other adjacent structures, the integrity also of which is restored by adjustment of the ligaments, this being an essential condition of success

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MILK IN INFECTIOUS DISEASES

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Milk has been used for so long a period and to such an extent that its status as a food ought to be settled beyond cavil or doubt Unfortunately this is not the case In this article it is my purpose to consider the objections to milk as a food for the sick, as well as its merits Before discussing the advantages it may be well to consider briefly the actual conditions present, particularly in the digestive organs, in persons suffering from an infectious disease

In infectious diseases it has not been found possible to prevent a steady loss of body weight by any method of feeding, save in rare instances This varies in an average daily loss of from 0 33 to 0 5 of 1 per cent of the entire weight during prolonged fevers A man weighing 150 pounds would lose from one-half to three-quarters of a pound daily or from 10 to 15 pounds in twenty days, notwithstanding that proper nourishment was supplied In pneumonia the loss has been as high as 15 pounds in twelve days

While the reserve fat is drawn on, the loss is chiefly in nitrogenous elements It would seem to be an easy solution of the problem of feeding the sick to furnish as much nitrogenous food as is lost by excessive metabolism Experiments show that if this is done the digestive organs are overworked, flatulence and loss of appetite may ensue, while in extreme cases an autointoxication may develop and instead of a gain there is a loss

A man in health requires food equivalents of from 2 500 to 3 000 calories if measured in heat units This must be divided among the chief classes of food in the proportion of 100 to 125 gm of protein 50 to 100 gm of fat and 300 to 500 gm of carbohydrates The normal man can not get along well with protein or fat alone or with fat and carbohydrates without protein, neither can the man with an infectious disease, though perhaps the body's demand is not proportionally so great In speaking of the need in fevers, Leyden of Berlin says "Fats and carbohydrates are just as necessary as albumin, no one is preferred to the others" It has been estimated that a man ill with some form of fever needs from 2,000 to 2,500 calories to maintain complete renewal of structure As this can not be entirely done, the actual need of the system is much less Clinical experience is in entire accord with this view, as is easy to demonstrate that a patient does very well on much less A laboring man if fed on milk would require 5 liters or approximately 3,000 calories a day, while 2 liters, 1,200 calories, have been found sufficient for an average patient stricken with an infectious disease

There is a progressive weakening in digestion as an infection advances The secretion of saliva is diminished or entirely checked, while mastication is difficult because of the dryness of the mouth and tongue. The gastric juice contains a diminished amount of hydrochloric acid, which may be entirely absent in some cases The stomach may be weak and irritable, with its motor function impaired According to Hoesslin, "on the part of the intestines fats and carbohydrates are quite well absorbed" These changes in the digestive organs vary according to the variety and intensity of the infection and its duration It used to be taught that when the temperature was high absorption of food could take place only to a slight extent This theory has long since been exploded, though probably tenaciously held yet by some Proper food correctly administered does not apparently increase the temperature. Indigestion with flatulence and possibly a decomposition of albuminoids producing an autointoxication may exaggerate symptoms and cause a rise in temperature

In a number of instances made in typhoid fever by experts attached to the U S Department of Agriculture it was found that about 80 per cent of the protein in milk appears to be assimilated It was also found that nitrogenous elements were more easily assimilated and in larger quantities when water was given freely This was especially true when the temperature was high

It is the ordinary custom at the beginning of an infection to stimulate the action of the bowels for the purposes of elimination When this is done the patient is ready to be placed on a gradually increasing diet, whether he craves food or not, in order that the body may be fortified to withstand any demands made on it. Of what shall this diet consist? What shall be the chief article of food? To the unprejudiced, careful investigator milk is found to possess the necessary constituents that make it an almost ideal food for the sick It contains protein, fat and carbohydrates, together with a small amount of salts usually required by the system, or all the ingredients needed to sustain and to nourish the body

As a rule milk is easy to obtain and, being a liquid, is readily administered This is of great importance in sickness among the poor or in families where skilled preparation of food can not be expected As each liter or quart contains 35 grams of albumin, 35 grams of fat and 45 grams of sugar, or energy represented by 610 calories, it does not require an expert or a chemist to estimate the amount of nutritive products the patient is receiving each day It is probable that no other food suitable for the sick can be gauged more accurately. The food value of soups, broths, etc., can not well be accurately measured except by the effect on the patient, and unnecessary weight may be lost before the discovery is made that the feeding is inadequate. As milk holds globules of fat in suspension, it is soothing to the irritated or inflamed mucous membrane of the alimentary tract. The diuretic effects from lactose which is readily absorbed and water are worthy of consideration as an aid in the elimination of toxins, for similar results can not be obtained from any other suitable food.

Some writers object to milk as food for the sick for some of the following reasons: It sometimes causes constipation; a certain form of bacterial decomposition may develop and possibly diarrhea; it is deficient in iron and has too large a proportion of fat compared with the protein and carbohydrates; it is insipid and, most important of all, forms tough, indigestible curds, which by blocking the lumen of the intestines or coming in contact with ulcerated surfaces in typhoid may endanger life.

One author (Benedict) objects to milk on account of its constipating effects and at the same time complains of the excess of fat, which tends to prevent constipation. It is a well-known fact that cream cheese does not have the costive effects of skimmed cheese or that made from milk with from 45 to 90 per cent. of the cream removed. If there is a deficiency in iron it can readily be supplied by occasional feeding with some liquid preparation of beef. If there is diarrhea or bacterial decomposition, or both, by a change in the quantity or in the method of giving milk proper conditions may be produced; if not, mixed or alternate feeding with other food substances may correct the abnormality.

The objection to the excess of fat can not be sustained by substantial reasons. The fat in milk is suspended in a fine emulsion. As a result the action of the intestinal juices in emulsifying fats is unnecessary, and the weakened organs are thus saved considerable work. It can reasonably be expected that the fat in milk is digested and absorbed to a much greater extent than would fat in other forms. It is known to be absorbed to a large extent even in typhoid. So great an authority as Klemperer does not seem to think that there is an excess of fat, for he states that in enteric fever "an addition of 50 grams of sugar of milk and 100 c.c. of cream to 1 liter of the milk markedly increases the nutritive value." By the addition of 0.5 liter of cream and 100 grams of sugar to 1.5 liters of milk the full theoretical calory requirement is attained, according to the same authority, if the patient is given a little alcohol in addition. If this amount of food could be properly digested each day the loss of weight should be reduced to a very small fraction.

The chief objection and the one that is entitled to careful consideration is that tough, cheesy curds are formed in the stomach and intestines, which may really do harm in their passage through the lower tract. To what extent is this true? When milk enters the healthy stomach it is at once coagulated by the action of the acids of the stomach and the rennin of the gastric juice. The casein thus separated into curds is then attacked and digested by the gastric juice. Should the stomach contain an excess of acids the curdling process will be more rapid and the curds firmer in consistency. If less hydrochloric acid is secreted, as is usual in infectious diseases the clotting process must be slowed but the curds need not be tough. On the contrary it is reasonable to expect that a softer curd would be the result.

If hydrochloric acid were absent or secreted in very small amounts there might be only a small degree of coagulation and consequently only a partial digestion of casein. If the curds were never compact they could cause no damage to ulcerated areas in the intestines. It is possible that the consistency and shape of undigested masses may be changed in the lower bowel. Curds found in stools may be quite different from those which passed through the small intestine. It is well to remember that curds do not have sharp edges or square corners, and that if they were not redissolved the friction and irritation to the intestinal wall would be less than that of a solid food, unless very finely divided. A high temperature can have but little effect on the curdling process, for in making cheese milk is heated to 110 or 112 F., yet several hours are required for separation of the curd, even with the help of rennin.

The indigestible curd is the *bête noire* that manufacturers of prepared foods hold up to physicians to induce them to use their preparations. One of these not long ago sent out an attractive pamphlet containing expensive cuts, which, together with the reading matter, were evidently intended to frighten the physician with possible dire results from milk curds in typhoid ulceration. A demonstrator of medicine in an Eastern school gives an elaborate account in this pamphlet of an autopsy performed on the body of a patient dead from typhoid, in which twenty feet of intestines were found filled with caseinous masses. He further claims that in autopsies made on typhoid cases fed with milk alone he has observed "the presence of tough cheesy curds in the intestinal tract, sometimes in considerable amount." He further states that "they occurred with more or less frequency" and draws the conclusion that they might be the determining factor in producing a serious outcome. The intention is apparently to impress the reader, who is, of course, a physician, that curds are found frequently at autopsies and that they are dangerous factors. Fortunately, they can be prevented, it is claimed, by using a certain food preparation, the virtues of which are extolled toward the close of the circular. Wishing to learn to what extent leathery curds were found at autopsies, I wrote to three of the leading pathologists in the United States, asking them to kindly answer the following questions:

1. In your examination of bodies dead from typhoid or other diseases, how frequently have you found a tough leathery milk curd in the small intestines?

2. If found, was this curd a cause of death or a contributory cause?

3. Was its formation due to defective digestion or to the conditions just preceding inevitable death?

Prof. L. Hektoen, of Rush Medical College, gave a negative answer to questions 1 and 2, which is also an answer to question 3.

Prof. Joseph McFarland, of the Medico-Chirurgical College of Philadelphia, states: "In cases in which I have opened the intestines myself I have scarcely ever found such curds, and in no case in which I did find them did I regard them of importance."

Prof. W. T. Councilman, of the Harvard University Medical School, answered these questions as follows:

"1. I have seen such masses.

"2. I have not considered that they contributed to death.

"3. I have regarded them as due to an injudicious pushing of a milk diet."

Since only two of these careful observers have discovered such curds, and one of these has scarcely ever found them, the conclusion can safely be drawn that they are rarely present at death. All were of the opinion that they were not a contributory cause of death. Is this testimony of these three eminent pathologists sufficient to lay the grim specter that has stalked in the shadow of tough, indigestible curds?

Much can be done to modify the curdling process in milk. If there is difficulty in digestion it is important that the casein be separated in a more flocculent form. Water given with milk or immediately after retards the clotting process and probably prevents a too firm formation. When water contains alkaline salts in solution it is hardly necessary to resort to limewater. Milk may be diluted with gruels made from cereals or with tea, coffee or cocoa. *Not only will the process in the stomach* be somewhat modified, but the insipid taste will be partly removed. At times it may be advisable to administer sour milk or buttermilk, each of which contains about one-half the calory value of sweet milk. When digestion seems difficult it may be a good plan to peptonize or pancreatinize the milk, that separation of casein may take place outside of the stomach.

The addition of citrate of sodium, from 1 to 3 grains to the ounce of milk, is being used in infantile feeding with great success. It apparently aids in preventing wrong curd formation or by rendering the casein more suitable for digestion. Being practically harmless, it can be added to milk given to adults when desired.

As milk requires about three hours for digestion in the stomach, the patient should not be fed oftener than this period, except in extreme cases. The stomach undoubtedly needs rest during disease as well as in health.

I do not advocate an exclusive milk diet, but I do claim that milk should be made the principal food substance in infectious diseases. Other valuable foods, such as the albumin of eggs or the juice of beef, which contains 6 per cent. of protein, may be used for alternate feeding or as adjuvants. Occasionally a patient has an extreme repugnance to milk and must be nourished by other foods.

Greater attention is probably paid to diet in typhoid than in any other infection, because of the intestinal lesions, and yet it has been claimed that less than one-fourth of the deaths are due to hemorrhage or perforation, while nearly one-half died from the severity of the infection. In other diseases, like pneumonia or variola, it is the severity of the infection that is the chief cause of death. Hence the great need in all severe diseases of maintaining the strength of the patient by proper nutrition. Lack of attention to feeding has undoubtedly been the cause of many deaths. For the system to win in a severe fight with the agents of death it must be fully and continuously supported.

The physician is beset by agents representing manufactured foods, each according to claims made superior to all others in some particulars. Some undoubtedly have merit and can be used to advantage for a brief period or for alternate feeding. The liquid preparations are ready for instant use and are easy to give at night. Their chief drawback is that they contain only albuminoid food, or nothing to maintain the vital processes unless it is the high percentage of alcohol. It may sometimes be forgotten by those opposed to alcoholic stimulation that the peptones are mummified in spirits and that with each ounce of food nearly one-half ounce of whisky or its equivalent is given.

At the Weld County Hospital, during the past four years, sixty-nine cases of typhoid have been treated in the charity department by different physicians, with a loss by death of two cases, or 3 per cent. The diet was exclusively one of milk, except when unfavorable abdominal symptoms developed. This record is much better than the average, though the nursing was probably not up to the usual hospital standard. So long as such results continue a change of feeding would apparently be unwise.

Shall physicians listen to the siren voices of commercialism and be cast adrift on the shoals of contrary claims and false representation, or shall they hold fast to a tried and efficient diet for the nourishment of the sick?

THE QUANTITATIVE ESTIMATION OF DIET, IN PRIVATE PRACTICE.*

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The science of cookery is an important branch of pharmacy, in the broad sense, the decision as to the quality of a food stuff, an important branch of pharmacognosy, and the management of the diet by the physician, a branch of therapeutics. The quantitative estimate of foods consumed, and a knowledge of their active, nutritive principles, is quite as necessary as a knowledge of drug dosage, with the proviso that the necessity for accuracy in the amounts prescribed is inverse to the powerfulness, that is, the toxicity of the substance administered. While in health a normal appetite or even habit may be a tolerably safe guide to the nature and amount of the food ingested, quantitative estimates become necessary in disease, especially as the disease influences or is influenced by metabolism, so that the avoidance of an excess or deficit or the purposive creation of an excess or deficit of food in general or of any particular kind of food, has a direct bearing on the case. Obesity, leanness and emaciation, consumption, anemia, protracted fevers, especially typhoid in this climate, diabetes, gout and lithemia, direct disturbance of the nutritive and climinative organs, nutrition of infants and the mentally deranged, including hysterics and the victims of habits, may be mentioned as requiring especial dietetic attention.

In this paper, the control of diet in institutions in which accurate metabolism experiments are feasible, will not be discussed, but only means available in private practice and involving approximate yet sufficiently accurate methods from the practical standpoint.

The following general rules should be laid down:

1. No single article of food contains the requisite proportions of the various proximate food principles necessary. To this rule we have one practical exception, that human milk or other milk, made to conform approximately to the gross analysis of human milk, is a satisfactory food for young infants, say up to the age of one year. This exception holds because the infant is build-

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* Read in the Section on Pharmacology of the American Medical Association at the Fifty-seventh Annual Session, June, 1906.

ing tissue, including fat, at a rate never subsequently paralleled and because the infant starts life with an excess of iron in the liver and, less markedly, in the spleen and marrow An exclusive milk diet ordered for an adult for more than a few days is a therapeutic crime often terminating in homicide A theoretic exception exists in the case of a few purely artificial foods, some of them available for a few days In most instances, the claim that a certain proprietary article is an adequate, complete nutriment can be excused only on the ground of gross ignorance Even if a theoretically adequate single food stuff existed, it would not sufficiently stimulate the digestive secretions

2 The conception of condensed nourishment is utterly fallacious The minimum daily adult requirement is about 50 grams of proteid, 300 of carbohydrate and 50 of fat and about 10 of mineral substances The first three being, on the whole, lighter than water, the volume occupied is more than 400 c c, approximately a pint. For various reasons, chemically pure nutriments are not compatible with the maintenance of life and the amount of indigestible material and water, contained in even apparently dry and concentrated food stuffs, can not fall much short of 50 per cent. Thus, about 800 grams, nearly two pounds, of solid food, occupying a bulk of nearly a quart, and not susceptible of any considerable compression, represent the minimum ration

3 In any case, allowing for deficiencies of absorption of nourishment, and deficits or excesses to be created according to opposite conditions inherent in the case, and allowing also for habits of exercise, and disturbances of oxidation, the attendant must start with a definite conception of the ration for each proximate nutritive principle proteid, fat, carbohydrate, sodium chlorid, iron or hemoglobin, water, etc needed He must then translate these requirements into terms of ordinary food stuffs, allowing as great a variety as possible

4 With certain rather rare exceptions, the following limits may be stated Proteid, not less than 50 nor more than 150 grams are to be given Russell H Chittenden's experiments should be taken as showing the minimum allowance of proteid on which the body, with an ample allowance of fuel foods, can possibly maintain a balance To hold that anything in excess of this minimum is injurious, would be analogous to saying that no clothing should be worn beyond that necessary to prevent arrest and frost bite The various older standards seem to show that somewhere between 60 and 100 grams of proteid is the proper ration In diabetes we are compelled to use proteid vicariously as a fuel food, but it is seldom advisable to exceed 150 grams

Fats need not be given at all, their place being filled by proteid and still better by carbohydrate About 30 grams may be introduced in apparently fat-free food One hundred grams is the maximum desirable for a healthy person, about 10 per cent being then passed through unabsorbed When 150 grams are given, at least 20 per cent is unabsorbed, and this is about the limit even in diabetes and phthisis and other states in which we are anxious to maintain or to increase the weight

Carbohydrates, even in diabetes, except for a few days, must be given to the extent of 80 grams to prevent fatty acid intoxication culminating in acetonemia In obesity it is well to reduce them moderately, but not so much as to prevent the formation of the requisite minimum of about 2 000 calories, for it is usually impossible to force the body to consume its store of fat by drastic measures Three hundred grams is sufficient for persons exercising moderately at moderate temperatures and 500 grams is nearly the limit even under conditions of extreme physical exertion and cold.

Of sodium chlorid, about 9 grams a day seems to be required or, at least, advisable, as much as 30 grams may be taken without obvious harm, at least for a limited period

Of iron, about 10 centigrams is required and this amount may be many times exceeded medicinally, without doing either harm or good Generally speaking, enough iron and salts, aside from sodium chlorid, are taken in a fair ration of meat

Of water, from 3,000 to 3,500 c c are required, the minimum normal elimination by the lungs, skin and kidneys being about 1,000 c c each A little water, possibly sometimes as much as 300 c c is actually produced by oxidation in the body About 1,000 c c are usually introduced in solid foods, leaving about 2,000 c c to be introduced in fruits and beverages, including water, of which about 1,000 c c should be taken If there is excessive sweating, diarrhea or diuresis, more should be given, though not to the degree of maintaining the latter functions to a pathologic degree Even in dropsy, water should be only moderately curtailed

TRANSLATION OF FOOD REQUIREMENTS INTO TERMS OF ORDINARY FOOD STUFFS

With regard to the problem of translating food requirements into terms of ordinary food stuffs, it is convenient to divide the latter into groups somewhat independent of the primary classification of proteid, fat and carbohydrate To avoid undue prolixity, the matter of the other proximate principles will be disregarded

Group 1—Food stuffs composed of practically only one organic proximate principle There is no natural food consisting of proteid alone, although lean meats, poultry, game and fish may be considered as 20 per cent dilutions of proteid, the fat amounting only to about 1 per cent and the carbohydrate to less White of egg is nearly pure proteid, amounting to 5 grams per egg Various artificial proteids are on the market

Sugar, sago, tapioca and corn starch are nearly pure (98 per cent.) carbohydrate

Butter, lard and olive and adulterant oils contain practically nothing but fat, butter being about 90 per cent, the oils almost 100 per cent fat

Group 2—Fodder vegetables containing practically no nutriment for man or other non-herbivorous animals There is no objection to the use of these vegetables in moderate quantities and they are even useful to stimulate peristalsis and as antiscorbutics, but they are usually out of place in dietaries for invalids It should be remembered that, on account of the burial of starch and sugar in dense masses of cellulose, the body does not derive even the amount of nutriment shown in analytic tables

(*a*) Almost entirely lacking in nutriment are Asparagus, cabbage sprouts, cauliflower, celery, cucumbers, beet greens, lettuce, rhubarb, sauerkraut, spinach (relatively rich in iron), tomatoes (rich in oxalates and hence harmful in gout etc)

(*b*) Containing nearly 5 per cent of theoretically available but practically unavailable carbohydrate are Cabbage, eggplant kohlrabi, leeks okra, pumpkin and radish

All of these may be allowed in diab [illegible] patient

Group 3 —Ordinary sweet fruits and certain succulent vegetables not of the nature of seeds (though, of course, containing seeds) Few of these contain more than 1 per cent. of fat, nor more than from 2 to 3 per cent of proteid On account of their consistence, neither proteid, fat nor starch is digested to any degree, but their freely soluble sugars, levulose and dextrose are quite absorbable These substances vary from 5 to 15 per cent or more in preserves, artificially sweetened, but as it is not usually advisable to give more than from 100 to 200 grams of such fruits and vegetables in a day, the total quantity of nutriment does not exceed 50 grams of carbohydrates and is usually much less

Group 4.—Fresh legumes, peas, beans and lentils, contain about 0 5 per cent of fat, from 2 to 9 per cent of proteids and from 5 to 20 per cent. of carbohydrate, but there is much waste on account of their consistence and, as they are best given in purées, it is exceedingly difficult to estimate their nutritive content

Group 5 —Dry leguminosæ and gramineæ seeds and meals, including bread stuffs, and cereals in the restricted sense Seeds are the only plant parts commonly containing enough proteid to nourish non-herbivorous animals and only seeds of these two orders are commonly employed as foods, although various nuts will be mentioned later Providing that these seeds are ultimately sufficiently comminuted and cooked, it makes very little difference whether they are bought as seeds or as flour or meal and whether they are cooked into crackers, biscuit, cake, bread, or are used in other forms While there are considerable individual variations, this group contains close to 1 per cent. of fat, from 7 to 25 per cent of proteid and from 50 to 70 per cent. of carbohydrate, mainly starch

Meals, flours, crackers and breakfast foods all contain about 10 per cent. of proteid and from 65 to 70 per cent. of carbohydrate, fat being artificially added to crackers and biscuits, so that the natural 1 per cent. content may amount to as much as 13 5 per cent for certain Graham and oatmeal crackers Macaroni contains 10 per cent of proteid, 70 per cent. of carbohydrate and practically no fat Bread is relatively moist, not to mention its distension with bubbles of carbon dioxid produced by yeast at the expense of carbohydrate It contains about 8 per cent of proteid, 1 5 per cent of fat and 50 per cent of carbohydrate and is usually spread with about 10 per cent of its weight of butter Gluten bread contains from 10 to 15 per cent. of proteid and about 40 per cent. of carbohydrate and does not differ enough from ordinary bread to be seriously considered in diabetes Indeed, the name furnishes an entirely false sense of security Oatmeal is popularly supposed to be highly strengthening but, as a matter of fact, there is not enough difference between oatmeal, corn, wheat and rice to amount to much, while the chaff of oatmeal is distinctly harmful in ischochymia Oats also contain a toxic principle Neither is there any appreciable difference between new process and whole wheat flour, in spite of the mass of hysterical literature on the subject.

Group 6 —Vegetables containing almost no fat, little proteid and moderate amounts of carbohydrate The principal members are the Irish potato, 2 1 per cent proteid, 22 2 per cent. carbohydrate, sweet potato, 1 5 per cent proteid, 27 5 per cent carbohydrate, banana, 4 8 per cent proteid, 20 2 per cent. carbohydrate Patients should be warned that the banana is different from all other fruits in common use and physicians should remember that it is the only important source of starch ingested raw It does not, of course, digest till the stomach is passed, except, perhaps, for the absorption of sugar and digestion of some proteid This may or may not be a contraindication to its use

Beets, turnips, carrots and parsnips contain about 1 5 per cent. of proteid and somewhere near 10 per cent. of carbohydrate, but on account of their consistence they are not important nutritives

Group 7 —Fat meats Clear salt pork and bacon and what appears as clear fat of other meats contain about 1 per cent of proteid and 80 per cent of fat. A streak of lean increases the proteid to 8 per cent and reduces the fat to 70 per cent. The muscle of mutton and pork and of the base of tongue is infiltrated with fat, so that the percentage of fat is about 35 and that of proteid 15

Group 8 —Eggs It is more convenient to deal with the actual amounts than percentages of nutriment. The white contains about 6 grams of proteid The yolk contains 2 5 grams of proteid and 5 grams of fat Six eggs, therefore, contain 51 grams of proteid, enough for a day's minimum ration, in addition to 30 grams of fat. Some years ago, an article appeared entitled "The Fable of the Egg," in which the author advised the use of 20 or more eggs a day, largely in a raw state, as an excellent ration The use of the word "fable" was unintentionally appropriate Obviously, any such number would afford a ration excessive in proteid and high in fat and, although the number of calories is nearly correct in theory, if two dozen eggs are taken, the lack of carbohydrate is not to be lightly considered Raw egg-albumin is not always assimilated and, in such amount, would be liable to be excreted by the kidneys as a foreign substance. It is doubtful if eggs have the aphrodisiac power popularly attributed to them While eggs are easily counted, it is worth while to remember that, in the form of a light omelet, two eggs make more show than four scrambled Hard boiled eggs are quite easily digested, especially the whites Indeed, pretty nearly every popular idea about eggs as food is incorrect

Group 9 —Milk varies considerably in different animals, referring both to species and individuals Cow's milk contains approximately 4 per cent. of each kind of organic nutriment Cream contains about 3 5 per cent. each of proteid and carbohydrate and from 20 to 25 per cent. of fat Cheese contains 25 per cent. of proteid, 30 per cent. of fat and only 5 per cent of carbohydrate, differing according to kind When sterilized by cooking, cheese is an excellent article of diet, even in the much maligned form of Welch rabbit (not rarebit) Milk is an exceedingly bad diet for patients, on account of its liability to tuberculous infection, colon bacillus infection with production of tyrotoxicon, saprophytic contamination, poverty in iron, the improper distribution of its organic nutriments for adults, its tendency to coagulate into indigestible masses, the large amount necessary for anything like adequate nutrition by calories, and the tendency to levulosuria when such adequate amounts are taken Clinical typhoid is really, in many instances, a comparatively mild original infection, plus a fatal intestinal toxemia due to saprophytosis plus inanition, the last two items being directly due to milk diet And yet, milk is almost indispensable in dietetics, if used with other foods and in moderation The old rule of thumb, that a typhoid patient could be nourished on a quart of milk a day is almost homicidal Five feedings daily of milk, variously modified, as in the form of weak coffee and cocoa, 250 c c to each feeding, with four soda crackers or other bread stuff at each feeding, is almost a theoretically ideal ration, except for the lack of iron, which can be compensated by the occasional use of meat extracts

Milk and eggs together, as eggnog, with or without whisky, or as baked or boiled custard, and preparations with salt and not sugar, approaching the omelet, the German pancake and one form of Welch rabbit, are highly nutritious

QUANTITATIVE ESTIMATION OF DIET

In estimating a dietary quantitatively, we have two clinically applicable methods, one in which convenient units are counted, the other in which actual weighing is used The former is obviously less accurate but is more convenient and, in the case of travelers, business men and residents of boarding houses and hotels, is the only one available. The dietary under this method need not be so very restricted

Milk, cream and salad oils may be measured by cupfuls or glassfuls or spoonfuls, respectively An ordinary tumbler or coffee cup contains about 200 c c when filled to the customary degree A tablespoon holds about 15 c c, a teaspoon 5 c c Cane sugar averages 6 grams to the lump

Crackers are quite uniform for each kind and the number in a pound (about 470 grams net) may be counted Small round Jersey crackers, weight about 6 grams, soda crackers, from 22 5 to 25 grams Hard rolls weigh very nearly 60 grams, equally divided into two parts Shredded wheat biscuits weigh 30 grams, or 3 of proteid, 2 of fat and 20 of carbohydrate to each

Eggs have already been discussed In the case of omelet and scrambled eggs, the patient can inquire how many are served

Bananas average about 3 grams of proteid and 9 of carbohydrate each

Tea and coffee can be estimated by the milk or cream and sugar added. Chocolate and cocoa contain an appreciable quantity of all three prime nutriments but, as ordinarily served, so little is used that we may neglect this and inquire whether the beverage is prepared with all milk or half milk and half water and add only the equivalent of a lump of sugar to our estimate, as for tea and coffee

A lamb chop contains about 30 grams of lean meat, 20 in the round part, 10 in pickings The fat ought not to be eaten by any one under dietetic restriction A thin cut of rolled roast beef weighs about 25 grams A small potato, less than is usually served, weighs 50 grams

Fruit sauces may be estimated by bulk, allowing 25 per cent of sugar, including that added

An average slice of round bread, Vienna, French or rye, weighs about 25 grams A small serving of butter weighs from 10 to 15 grams

The above unit dietary, allows a fairly accurate estimate of the amount ingested to be made by any reasonably intelligent patient who will accustom himself to the size of cuts of meat, servings of potato, etc, of known weight and it is quite liberal in variety Then, too the innutritious relishes may be allowed if no contraindication exists Clear soups are almost lacking in nourishment and, in many cases, even pie, cake (estimated as bread plus 10 per cent of sugar) string beans, peas, etc. may be added and the amounts of nutriment partly calculated from tables and partly guessed at.

When we can reach the kitchen authorities we may also estimate the content of average servings of ice cream, gelatin desserts, etc The arithmetic computation is not difficult though it must be made in two steps For example, counting pints at 500 c c each, the error being quantitative and not proportionate, so that it is negligible, we may estimate the nutritive content of a serving of ice cream as follows, following a given formula

	Grams		
	Proteid.	Fat.	Carbohydrate.
Milk, 500 c.c.	20	20	20
Cane sugar 750 grams			735
Wheat flour 25 grams	4		14
Cream 1 500 c.c.	52	300	52
Four whole eggs	34	20	
	110	340	821

Ordinarily, about 125 c.c. of ice cream are served to a person, 200 c c being a liberal dishful for a small boy Thus, we may estimate the serving at 5 5 grams of proteid, 17 of fat and 41 of carbohydrate

In estimating home dietaries, a special supply of salt, sugar, butter, a package of any cereal, a given loaf of bread, etc, may be reserved for the patient and the consumption for a period of a week or so may be brought to a daily average Candy, an excellent article of food in many conditions, may also be reserved for the patient and the sugar estimated at about 400 grams for each pound of candy If the candy is home-made, the exact proportion of sugar and other ingredients may be determined So, too, shelled nuts which are rich in fat and proteid may be weighed in bulk and the exact nutritive value calculated from tables Even popcorn, if the hard seed coats be excluded, is an excellent addition to the invalid's diet

The method of estimating diet by weight and measure can often be carried out by the patient, who may, indeed, actually be diverted by the occupation, though certain nervous invalids must have this done for them, the remnants of food being subtracted from the servings Patients seriously ill, usually are best placed on a simple dietary which can be still more easily estimated by the nurse, even if she is an amateur of reasonable intelligence

If economy is necessary, any fairly ingenious person can make a pair of scales that will balance to the fraction of a gram, out of light metal jar covers, connected to a metal bar about a foot long that has smoothly drilled in it a central hole and two others at equal distances near the ends Silk threads or fine, soft metal wires may be used for suspending the pans and the beam or the latter may revolve on a smooth pin Five gram weights of considerable accuracy are furnished by the U S Government at a cost of five cents each and are legal tender when no longer needed as weights I refer to new nickels Graduates can be made of tumblers or olive bottles, marked by strips of adhesive plaster or by a file scratch No difficulty need be feared from the use of the metric units as only the gram and c c need be used Indeed, while the patient is familiar with the name ounce, he usually has not the faintest idea of how much food or drink it represents and, with regard to ordinary viands, the physician is not much better informed Here is an appropriate place to confess that this paper has been prompted by the rather recent realization that, after writing a book on dietetics, and giving considerable attention to the subject, I had very vague ideas as to the weights of most ordinary articles that I was eating daily

The patient or nurse should prepare for the physician a diet sheet in which the meals and days are clearly lined off from one another For each [illegible] th [illegible] ould be placed at the left the names of [illegible] n and drunk then their quantities [illegible] columns, the amount of proteid, fat and carbohydrate contained, as shown by food analyses obtained from any standard text-book A surprising number of well-educated adults will state that, knowing the number of grams or c c and the percentages of each of the three organic nutrients, they can not calculate the latter in grams But if the diet sheet is prepared in blank, the physician can easily add these latter, get their totals for the day and suggest additions or omissions necessary to make the diet conform to the desired standard for the particular case

DISCUSSION

Dr H. Stern, New York City, said that Dr Benedict evidently is an adherent of the dietary standards laid down by Chittenden No doubt that Chittenden is correct in making his experiments It has become a fad to give less food As a matter of fact, Chittenden speaks of proteid values which certain foodstuffs present By ingesting that certain foodstuff we do not get the proper amount of calories Therefore, if we speak of food values and say that a certain human being eats 20 calories for each kilogram of his weight, it is understood that we mean liberated calories and not raw calories For instance, a lump of sugar, that is not saccharum It contains some water Water has no caloric value whatever We speak of elaborated calories, not calories which are ingested, but calories which are absorbed, and not foodstuffs which produce a certain amount of indigestible material Dr Stern said that egg albumin is different from serum albumin, and that whenever more than five or six eggs are taken egg albumin is found in the urine Yolks can be well tolerated A man can take 20, 30 or even 40 eggs daily It is essential in cases of under nourishment that material is fed which does not leave any of the fat acids This is the only one that does not give fat acids Dr Benedict, he said believes what von Noorden teaches, that acetone substances are diminished by the ingestion of carbohydrates Certainly, in the case of oatmeal, which does not yield any of the low fatty acids, this is true If we have fat substances, which von Noorden recommends, even in these substances we have the production of low acetone substances, such as butter By not taking these butyric substances the formation of the acetone substances is prevented, therefore, the best substitute would be fatty matter which does not contain oxybutyric acid Therefore, the yolk of the egg is the best substitute we can have

Dr William R. White, Providence, R. I, cited the case of his son, who has presented a very peculiar dietetic problem He has been called a dietetic crank by all who know him His chief peculiarity has been that he has not eaten meat, nor has he been a vegetarian, because he has not eaten vegetables It was absolutely impossible to get the boy to eat ordinary foods so far as meats and vegetables were concerned The banana has proved an important element in the boy's diet Many days he will eat from eight to ten bananas in the course of the day Dr White said that ordinarily, if the boy has the opportunity, he will take a shredded wheat biscuit and crumble it, add two or three perfect bananas sliced, pour over it a large quantity of the best milk and a moderate amount of sugar, and that combination he will take three times a day He has been doing it for years He seems to be in perfect health, has excellent color, splendid teeth, and is most uniform in his temperament He never complains of heat or cold, and is a splendid sleeper He proves by his individuality and his physique that his instinct has been a safe and good guide

Dr E B Fullerton Columbus, Ohio, stated that it is very hard to get patients always to trust to diet, and there are reasons why one can not put this sort of dietary into operation In hospitals and with rich patients it may be effected but in the country there is not this great number of foods to select from The extreme of this, perhaps, is Hudson Bay, where people have only two or three articles of diet In regard to the limit of diet, Dr Fullerton said that one can not limit everyone in the character or amount of food taken

Dr. A L Benedict, Buffalo, stated that Dr Chittenden's experiments were conducted with the purpose of ascertaining the minimum proteid ration necessary to maintain nitrogen equilibrium, with an abundant ration of fats and calories In interpreting them he has unquestionably been influenced to some degree by personal factors, that is to say, the requirements of a fairly sedentary, intellectual rather than physical, life, and it must be borne in mind that he has used tobacco and coffee freely, though not excessively It is doubtful whether, without these dietetic adjuvants, he could have been quite so abstemious in proteids Some of his critics and adherents, he said, have also made the mistake of supposing that he intended to apply to the standard physiologic man the proteid ration which he has found possible for men of less than the average size, performing less than the standard amount of exercise While the conditions of his experiments are beyond criticism as regards accuracy of observation, duration of the tests, hygienic surroundings and gradation of exercise according to the habits of the individual, it must be remembered that two factors, present in the ordinary strenuous life of to day were, in the main, minimized viz, sexual function and worry as to self support

So far from dissenting from the possibility of living on Chittenden's minimum proteid ration, Benedict found that his own diet, chosen entirely by appetite, except for the endeavor to hold his weight down by eating very sparingly of plain foods for which he does not especially care, conforms very closely to Chittenden's, allowing for differences in weight and amount of exercise At the same time, while admitting that the earlier standard dietaries were high, especially in proteid, he does not believe that proteid alone should be singled out for abstemiousness, nor that it is necessary to adhere to the minimum ration required to prevent nitrogen deficit He thinks that the matter of diet should be regarded very much as is that of clothing A certain amount of clothing may be required to prevent freezing or being arrested, but there is no objection to exceeding this amount to a reasonable degree

Regarding sugar, Dr Benedict has recently taken pains to inquire of a chemist, to be sure that he had made no mistake Commercial white sugar is nearly 99 per cent pure and there is absolutely no water of crystallization A small amount may be present as moisture Of course, candy, for economic reasons, contains all the water it can hold, but good candy usually consists of at least 80 per cent. of sugar In regard to the white and yolk of egg While the yolk is ideal as a food rich in proteid and fat, many persons can not tolerate it The white is, at least, not disgusting

Regarding acetonemia and allied problems, he does not in the least understand why this proverbial 80 grams of carbohydrate is necessary to prevent the formation of toxic amounts of fatty acid products He emphasized the fact that in diabetes the fat ration must not be run too high, and placed 150 grams as the maximum for most cases Bananas may be used to supply the proteid and in nearly ideal ratio to carbohydrate But, in order to introduce 50 grams of proteid, about 1,050 grams of peeled banana or, say 23 average specimens, would be needed This quantity would contain a little more than 200 grams of carbohydrate Practically, so large a quantity of cellulose would be introduced that there would be a great deal of waste in the bowel, not to mention the mechanical disadvantage, fermentation, etc Still, it is necessary to consult the tastes and idiosyncrasies of each individual

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Escape of Cerebrospinal Fluid Through Ear with Intact Drum.—Lewin reports in the *Allg med Ct Ztg* for October 6 the case of a girl of 14 who fell against a stove and must have fractured the base of the skull where it forms the wall of the outer auditory canal No rupture at this point could be detected in the swollen soft parts, but cerebrospinal fluid flowed freely from the ear, in amounts reaching 2 to 3 liters a day for several days A remarkable feature of the case was the absence of symptoms referable to this great loss of the cerebrospinal fluid, the constant wetting being the only complaint He knows of only one similar case on record The amount grew gradually less until the flow ceased entirely by the end of the third week.

THE DIET IN ALBUMINURIA *

A CLINICAL-EXPERIMENTAL STUDY

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Albuminuria is nothing but a symptom of disease The cause of the symptom may be anterenal, renal or postrenal, and may be due to structural change or to pathologic function Postrenal albuminuria, an admixture of various adventitious proteid substances with the urine after this has left the renal tubules, does not come within the scope of the subject under consideration In the case of anterenal or renal causes, it is the albumin of the serum, or rather albumin having passed through the circulation which has found its way into the urine We are perfectly justified in accepting anterenal factors of albuminuria when we are confronted with a large albumin output without corresponding kidney lesion as shown by the presence of goodly amounts of tubular epithelium We may yet go a step further and maintain that native serum albumin occurring in normal amounts can not be eliminated, even by a structurally altered kidney, and that the serum albumin we meet in the urine has undergone physical and chemical transformation prior to its passage through the renal organs

Hence, the real factors of albuminuria may antedate any renal anomaly At any rate, it seems dubious whether or not the kidney alone can ever be the starting place of albuminuria If the kidney itself is not the primary or true cause of the albuminuric symptom, what is the use of applying renal therapy for the elimination or suppression of the albumin? How little that plan of treatment avails in this respect is a matter of every day experience Again, another question looms up Shall we endeavor to combat the albuminuria at all? Is its reduction or cessation a signal of bodily improvement or is the albuminuria a compensatory phenomenon, a friend in disguise?

These few words may suffice as introductory remarks to the following recapitulation of my first series of clinical-experimental studies concerning the influence of diet on the degree of intensity of albuminuria This series of observations was made on 82 patients, affected with various diseases, of which the phenomenon in common was continued excretion of serum-albumin, so-called, with the urine In this series of observations my sole object was to determine the influence of certain types of nutritives and ingesta, not on the underlying disease, but on the accompanying chronic albuminuria I may add that, according to the clinical conception of to-day every one, or nearly every one, of these underlying diseases would have been classified as belonging to those of the kidney

The albumin determinations were made in all instances with the 24 hours' urine, and were started 48 hours after instituting the diet and by means of Esbach's albuminometer, which, although inexact, is accurate enough to point out the fluctuations of the degree of the albuminuria

PROTEIDS

Prior to the addition of the various other proteid-containing ingesta to the nutriment of the albuminuric, the latter was kept on an exclusive milk regimen for two weeks According to the weight, the daily consumption of milk amounted to from three to four liters which represents an intake of from about 100 to 140 grams of albumin In a few instances the milk was abruptly withdrawn, to be at once replaced by other nutritives yielding, besides the necessary carbohydrates and fats, from 70 to 100 grams of proteid material In the great majority of cases, meats, fish and eggs were gradually substituted for the milk, the replacing process taking on the average about two weeks Individuals weighing from 100 to 115 pounds ultimately received 70 grams of albumin a day, those weighing from 115 to 130 pounds, 80 grams, those from 130 to 145 pounds, 90 grams, and all whose body weight exceeded 150 pounds received 100 grams The daily amount of proteid was then usually obtained from two or three eggs (never in the raw state), from mutton or chicken, and principally from beef The eggs, as a rule, were partaken of at breakfast, the meats, in about equal portions, at the midday meal and at supper To prevent renal irritation meats of young animals and organs yielding large amounts of nucleins, as veal, lamb, liver, kidneys, sweetbreads, etc, were omitted

The following observations were made

1 In 21 individuals a two-weeks' exclusive milk regimen and bed-rest were followed by diminution of the albuminuria in 16 instances, by its complete cessation in 2 instances, and led to no material changes in the remaining 3 instances

2 In 36 individuals a two-weeks' exclusive milk regimen and moderate bodily exercise were followed by diminution of the albuminuria in 5 instances, by its complete cessation in no instance, by no material changes in 29 instances, and by distinct augmentation in 2 instances

3 In 25 individuals a two-weeks' exclusive milk regimen, without any restraint as to exercise and work, was followed by diminution of the albuminuria on one occasion, but for a very brief period only, by no pronounced changes in 18 (respectively 19) instances, and by more or less increase in the remaining 6 instances

4 In two individuals at bed-rest the sudden withdrawal of milk and the substitution therefor of meats, fish, and eggs (and carbohydrates and fats) remained without noticeable influence on one patient, but caused a marked augmentation of the albuminuria, subsiding after about 36 hours in the other

5 In 16 individuals at bed-rest the gradual withdrawal of milk and the corresponding addition of meats, fish and eggs (also carbohydrates, etc), was followed by transitory augmentation of the albuminuria in one instance by no pronounced changes in 12 instances, and by a more or less permanent decrease in 3 instances

6 In 4 individuals performing moderate bodily exercise the sudden (unauthorized) replacement of the milk regimen by proteids, mainly derived from meats (and carbohydrates etc), remained without noticeable influence in any case (Seen from 2 to 8 days after institution of meat diet)

7 In 29 individuals performing moderate bodily exercise the gradual replacement of the milk by other proteid nourishment (and carbohydrates, etc) was followed by transitory augmentation of the albuminuria in 5 instances, by permanent augmentation in no instance by no distinct alteration in 20 instances, and by a more or less permanent diminution in 4 instances

8 In 1 individual attending to his usual vocation the sudden replacemen[illegible] by other proteid ingesta remained wi[illegible] [illegible]n the [illegible] of intensity of the a[illegible]

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* Read in the Section on Pharmacology of the American Medical Association at the Fifty-seventh Annual Session June 1906

9 In 30 individuals who devoted approximately the usual amount of bodily and mental energy to their occupations, the gradual withdrawal of milk and the corresponding addition of other proteid ingesta, were followed by transitory augmentation in 1 instance, by no distinct alteration in 23 instances and by a slight diminution in 2 instances

10 The only individual in whom supervened a permanent augmentation of the albuminuric symptom on changing from milk to other proteid food was affected with atheromasia, chronic parenchymatous nephritis and diabetes mellitus

CARBOHYDRATES AND FATS

From three to four liters of milk contain on the average from 135 to 180 grams of lactose and from 120 to 160 grams of fat The albuminurics subsisting for two weeks on an exclusive milk regimen obtained every day, therefore from about 550 to 750 calories, which were elaborated from the carbohydrate, and from about 1,100 to 1,500 calories which were yielded by the fat Exclusive of the proteid, they ingested therefore enough nutriment to yield from 1,650 to 2,250 calories a day

When the milk was replaced by other food stuffs, not the proteids alone were reduced, but the supply of the carbohydrates and fats were curtailed from 10 to 25 per cent This was done, first, so as not to overtax the patient's digestive powers, second to reduce the intake of water which runs parallel to that of carbohydrates and fats and, third because the energy evolved from the nutriment was deemed sufficient not only for those at bed-rest and moderately occupied, but also for those who attended to their routine work Of course, the greater carbohydrate and fat reduction (from 15 to 25 per cent) was made for the individuals at bed-rest and those performing little work, the smaller reduction (10 per cent) for those who had not discontinued their usual mode of occupation Gradually the carbohydrates and fats, like the meats, fish and eggs, were made to replace the exclusive milk regimen The instances in which the change from the one to the other regimen occurred abruptly have already been mentioned In a number of instances from 200 c c to 600 c c (and in a few cases even larger amounts) of milk were continued to be ingested after the exclusive milk regimen had been discarded, this fact, however, was taken into due consideration in every instance The carbohydrates made use of were mostly wheaten bread, cereals, potatoes and sugar, the fats, yolks of eggs, olive oil and suets

The following observations were made

1 The commonly employed carbohydrates and fats, consumed in amounts which do not overtax the functional capacity of the various digestive organs and which, at the same time, yield sufficient energy to prevent disintegration of the body substance do not exert any other influence on the degree of intensity of the albuminuria than the carbohydrates and fats contained in milk

2 There is no evidence whatsoever that the commonly employed carbohydrates and fats exert any participating influence on the production or on the rise and fall of the albuminuria

3 In the albuminuric the carbohydrate-fat-proteid ratio may be practically the same as in the healthy individual but that it appears to be advantageous to reduce the *entire intake* from 10 to 25 per cent.

WATER

The patients who ingested from three to four liters of milk a day imbibed thereby in the neighborhood of from 2,580 to 3,440 c c water This is rather a large amount, larger than it probably ought to have been in certain instances, especially in those of contracted kidney However, if milk is to be the sole or the main nutriment in albuminuria, as has been the dictum of nephritis therapy, this surplus of water can not be averted Some years ago, v Noorden advocated a decided reduction of the water intake in nephritides His own pupils, Mohr and Dapper, however, have shown that if but 1,250 c c of water are taken daily, the degree of the albuminuria would become perceptibly increased and that practically the amount of water to be imbibed each day should not fall short of 1,500 c c In this series of dietary experiments 35 c c of water a day for each kilogram of body weight were allowed the patient A further reduction of liquid would have resulted in a disturbance of the intrasystemic equilibrium A patient weighing 60 kilograms (132 pounds) received therefore 2,100 c c of water daily

The ingestion of water, or weak unsweetened tea, was begun when some of the milk had already been withdrawn, generally three or four days after starting the gradual admission of the other food stuffs

The following observations were made

1 Water, in large amounts, as imbibed with an exclusive milk regimen, enhances diuresis and intestinal peristalsis and that it is often productive of, or is keeping up, various gastrointestinal disorders

2 The larger water intake, that is, up to 3,500 c c a day, neither increases the degree of intensity of the albuminuria, nor augments the absolute output of the urinary albumin in the vast majority of instances

3 If smaller amounts of water, that is, 35 c c a day per kilogram of body weight, are taken, the intensity degree of the albuminuria may become temporarily augmented, and after one or two days the absolute amount of urinary albumin is approximately alike to that when larger amounts of water are imbibed

4 In the treatment of albuminuria *per se* the maximum amount of water which may be taken is of little practical importance unless an advanced heart or kidney disease or some gastrointestinal disorder, demands an adjustment, and the minimum amount of water must never be less for any length of time, than that which is essential for the performance of the intrasystemic osmotic processes

DISCUSSION

Dr. Alfred C Croftan, Chicago, stated that in discussing the subject of albuminuria it is important to realize that albumin is determinable in every urine In other words, albuminuria is a physiologic phenomenon An increase of the normal urinary albumin occurs in so many conditions that are more or less independent of renal disease, that it is important to study the manifold origin of this symptom before undertaking to treat it In many cases albuminuria is a symptom more of cardiovascular disorder than of renal disorder In other cases metabolic disturbances, which lead to the flooding of the blood and tissue juices with abnormal products of intermediary metabolism, lead to renal irritation and albuminuria In still other cases the albuminuria is due to digestive disorders, pure and simple In none of these forms can one speak of a nephritis

That there is really an alimentary albuminuria is made clear by the following facts It can be demonstrated that certain albumins given by mouth promptly reappear in the urine It is a well known fact that the injection into the peritoneal cavity of a guinea pig or of a rabbit of a certain amount of egg albumin, bestows on the serum of the animal the property, after a number of weeks or months of these injections, of forming specific precipitins in the test tube when mixed with egg albumin If, now, a serum prepared in this way is added to the urine of an individual who has been given from ten to twenty eggs to eat in twenty four hours, especially if the individual is suffering from a dilated stomach, then a specific precipitin reaction will promptly appear This is positive proof that the egg albumin as such was absorbed, passed through the blood and reappeared in the urine From the life insurance standpoint this test is very important As far as the circulatory element in many forms of albuminuria is concerned, Dr Croftan stated that it will frequently be found that the excretion of albumin proceeds pari passu with changes in the blood pressure The albuminuria due to metabolic derangements is renal in the sense that some irritation of the renal parenchyma by abnormal chemical products must be incriminated with producing the albumin excretion

In interpreting albuminuria and in attempting to treat it rationally, physicians should depart from the purely renal standpoint, unless there is distinct morphologic evidence in the urinary sediment of renal disease, and bestow more attention on the treatment of the individual

Dr Croftan said that for a time he was an enthusiastic disciple of von Noorden's teachings in regard to drink restriction in nephritis However valuable this method of treatment may be in that type of true nephritis in which the renal affection is only a part phenomenon of a general cardiovascular disturbance, the restriction of the liquids is, of course, eminently rational, for here the heart should be treated rather than the kidneys In many other forms of nephritis, and especially in the forms of albuminuria without nephritis, drink restriction may, however, be quite useless, if not detrimental, for in the latter category of cases it is quite important that the circulating toxins should be diluted properly and that they should reach the kidneys in as low a concentration as possible. Inasmuch as the disturbances about the cardiovascular apparatus in this type, especially stenocardiac attacks, and other consequences of high blood pressure, are frequently produced by the circulation of toxic bodies that fail of proper elimination through the kidneys, it is especially important, in order to prevent serious cardiovascular complications, to administer plenty of water The advantages accruing from this practice, he said, fully overbalance any theoretical disadvantages that one might imagine to accrue to the heart and arteries when they are forced to pump large quantities of liquid, in fact, sometimes, paradox as it may seem, the blood pressure will be found to go down when large quantities of water are given

Dr. A L. Benedict, Buffalo, asked whether, in obesity, there is an analogue to the hyperglycemia not directly due to alimentation In regard to the use of water, whether trying to make the body take up a dropsical effusion or extrude toxins, he has been struck by the impossibility of forcing any endeavor by drastic measures He has found it a good plan, in cases chronic Bright's, to have the patient occasionally spend an afternoon or evening drinking two or three liters of water, as hot as can be tolerated, flavored with salt, lemon or whatever the patient likes He asked Dr Stern whether his statements of the amount of albumin are in parts per thousand or are they quantitative for twenty four hours Dr Benedict uses the centrifuge method, after simple boiling, for estimating albumin in urine There often is more toxemia in cases showing only 1 per cent of albumin by bulk (about one sixth as much by weight) than in those with more albumin. The highest reading he has gotten has been 6 per cent albumin by bulk, or about 1 per cent by weight

Dr. H C Wood Jr., Philadelphia, thought that water plays more than one rôle in cases of renal disease Acute cases of nephritis are usually due to the presence of some irritating substance circulating in the blood It is only reasonable that these irritating substances will become less irritating the more they are diluted This is a well known pharmacologic fact about which there can be no doubt As regards the effect of the water which enters the blood, it is commonly believed that any excess of water which comes into the blood must escape through the kidneys, and yet the evidence of this is not at all convincing A year or two ago he repeated some experiments which had been done many years ago by Magnus concerning the effects of large amounts of physiologic salt solution on the blood and the excretory apparatus It is possible to inject into the animal the amount of salt solution equal to the body weight of the animal, without very markedly increasing the blood pressure This excess of fluid does not escape in any great part from the kidneys Four fifths of the salt solution escaped from the body through some other channel, probably the intestinal tract In every case in which he used the salt solution he found the intestine filled with fluid Two things are evident First, that the large amounts of water ingested do not increase the blood pressure, and that the vessels are capable of taking care of an enormous amount of fluid In the conditions he described the percentage of hemoglobin fell to 60 per cent., that is, the blood was diluted to one half its concentration—the albumins and other organic constituents of the blood were equally diluted, showing that there is a true dilution of the blood, and presumably a dilution of any toxic substance in the blood The effect of this large amount of water, he said, seems to be a double one It dilutes any irritant substance circulating in the blood so that there will be a lesser irritation of the kidney, second, it encourages elimination through the intestinal tract, which thereby spares the kidney a large amount of work and permits an attempt at recovery from irritation

Dr H Stern, New York City, recalled two or three articles detailing certain work, giving positive proof that egg albumin passes through the blood and is excreted again as such Whether there is an increased amount of serum demonstrable in the blood serum, he said, can be determined only by the electric measure There is no ionic movement. In uremia there is a hyperosmosis Hyperglycemia can be spoken of As to the examination of the urine, Dr Stern said the simplest test is the best He has used the acid tests and Esmarch's, which is no good, excepting for fluctuations It is the absolute amount of albumin which is thus measured in twenty four hours In this way simple experiments have been undertaken to find out whether the excretion of albumin has been increased by certain diet, and the result of these studies has been to show that proteid materials have very little aggravating influence on the intensive degree of the albuminuria

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NOSTRUMS AND FRAUDULENT METHODS OF EXPLOITATION

L F KEBLER, M.D
Chief of Drug Laboratory Bureau of Chemistry U S Department of Agriculture
WASHINGTON, D C

(Concluded from page 1550)

LOST MANHOOD RESTORERS AND NERVOUS DEBILITY CURES

"AMBALINE"

This is a mixture of camphoraceous water and ammonia water in which are dissolved ammonium carbonate, ammonium chlorid, sodium sulphate and chlorid This lotion is to be applied to the affected part and is claimed to possess miraculous powers The action of the lotion is simply that of an irritant which increases the blood supply to the parts

BRADFORD & CO CINCINNATI

This company announces

A Complete Treatment for the Cure of Nervous Debility, Loss of Memory, Dizzy Head, Sexual Weakness, Premature Old Age, Impotency, Weak Back, Confusion of Ideas, Eruptions on the [illegible] and A[illegible]es of the [illegible]erative Organs

The company also claims to be able to develop shrunken organs and permanently cure varicocele The medicines used are claimed to be the very latest and best known to science and never used by quacks on account of their ignorance and the high price The general scheme employed is to advertise an alleged free cure for lost vitality, sexual debility, etc When responses are received the party is mailed a letter, enclosing a circular giving the prescription The circular represents that the prescription is the result of the studies of two learned scientific men, one a successful practitioner for over forty years and the other a manufacturing chemist of thirty years, both men standing without peers in their profession An investigation showed that the learned practitioner of over forty years' experience belonged to the quack school, and the chemist was without reputation The prescription was written expressly for this scheme It had hardly been given a trial Mr Bradford, the sole active member of the company, has no medical knowledge whatever

The exaggerations are similar to those employed for schemes of this type The following quotations are representative

> Nervous Debility can be cured with the specific remedy The Result of Forty Years' Practice in curing these diseases, a tested and time tried prescription When you consider you are getting the result of over forty years' successful practice you are very fortunate and will make no mistake if you stick to this treatment

These statements and the connections in which they are used are designed to create the impression in the minds of the readers that this medicine, by reason of the long time in which it has been developed through actual practice, possesses peculiar efficacy and value and is not commonly known or usually prescribed in the treatment of these conditions This impression is entirely false and not warranted by the facts of the case When Mr Bradford commenced his business about four years ago, he sought out the physician and obtained from him an ordinary prescription for the treatment of this class of diseases The physician from whom the prescription was obtained had no more than the usual knowledge and ability with respect to these diseases, and had no more than ordinary (if ordinary) ability The circulars giving the prescription also contain quotations from the writings of many doctors so selected and changed as to cause the reader to believe that they were written particularly for the medicines employed in this scheme As a matter of fact, the writings were not made with reference to these medicines, nor were they intended by their authors to be used as they are being used, and their use in this manner is entirely unauthorized and is intended to deceive and mislead

The company's literature also represents that the medical profession endorses the medicine. As a matter of fact, the medical profession knows nothing of the composition of this medicine, therefore, it is unreasonable to say that the profession endorses it An investigation shows that the medicine consists of one of the many forms of aphrodisiac pills

"CACTUS PRODUCTS"

These remedies are exploited by the Cactus Product Company, Philadelphia, and consist of "Cactus Lecithin Tablets," "Cascarin Tablets" and "Cactus Lecithin Salve" It is represented that the above medicines will cure all vital weakness nervous debility, atrophy, varicocele, and all affections of a similar type The name "Cactus" itself is a misnomer, inasmuch as no cactus product is contained in any of the preparations enumerated "Cactus Lecithin Tablets" contain ordinary ingredients, such as are commonly employed by the medical practitioner in the treatment of nervous debility, excepting lecithin The "Cascarin Tablets" are representative of the many laxative tablets on the market The mixture for which the great claims are made is the "Cactus Lecithin Salve," which contains the following ingredients

> Lecithin, fluid extract of damiana, celery seed, capsicum, and extract of rose geranium.
>
> Mixed into a suitable salve with enough petrolatum and paraffin wax.

The action of the salve is secured by applying it to the affected part. Virtually the only active agent in the salve when thus applied is the capsicum, the lecithin and other constituents being practically useless under these conditions

"CALTHOS"

"The world's greatest remedy for the treatment of male affections" It is claimed to be imported by the Von Mohl Company, Cincinnati, Ohio It is represented that the preparations used are those of Prof. Jules Laborde, an eminent French nerve specialist The literature employed by this company is vulgar and misleading in every detail The pills employed contain yellow phosphorus as the chief ingredient. The representations made by this firm were found on investigation to be unwarranted

"CUPIDENE."

This remedy is placed on the market by the Davol Medicine Company, San Francisco, and consists of red and white pills An examination of these pills shows that the active constituents are red pepper, Spanish flies, mustard and bitter principle It is represented to be a "Great Vegetable Vitalizer," discovered by one of Europe's most celebrated physicians and is claimed not only to relieve but permanently to cure all complaints and diseases of the sexual organs, such as lost manhood, impotency, varicocele, constipation, etc Pictures portraying "before" and "after" treatment are also employed It is especially held out as being of value to married people

"MORMON BISHOP PILLS"

The following are quotations from the literature

> This Remedy has been in use for fifty years by the heads of the Mormon Church and their followers. Many men suffer from the evil effects of self abuse, over indulgence, excesses in use of tobacco and liquors, anxiety and worry These bring on one or more of the following diseases Lost Manhood, Nervous Prostration, Nervous Debility, Dizziness, Headaches, Indigestion, Loss of Will Power or Memory, Nocturnal Emissions, Pain in the Back, Loss of Semen, Impotency, Incapacity for Marriage, Sleeplessness, Spermatorrhea, Loss of Vital Fluids, Prematureness of Discharge, Varicocele, Atrophy, Hydrococele and Constipation. If you suffer from any of these symptoms take Mormon Bishop Pills and be cured before it is too late. Do not become discouraged, no matter if you have tried many of the so-called cures Take Mormon Bishop Pills and a cure is certain.

In this treatment three differently colored pills, red, white and blue, are employed The difference in color would lead to the belief that they are of different composition, but analysis shows that they are virtually the same in this respect They belong to the general type of aphrodisiac pills

"REGENERATIVE TABLETS"

Exploited by the Fallopia Lynn Company, St Louis, Mo It is represented that the tablets employed by this firm are such as will create a youthful feeling, dispel all bad effects of indiscretion, and are "A Regenerator and Tonic for Weak Men" An examination of the tablets shows that they are of a composition similar to that ordinarily employed by regular practitioners for tonic purposes, coupled with some of the recognized aphrodisiac agents One of the active ingredients is strychnin

"RESTORATIVE REMEDIES"

The parties exploiting these remedies have for various reasons changed the name of the company several times It was at one time known as the Dr Knapp Medical Company and at another time as the Dr Raynor Medical Company The scheme employed by the above companies is to advertise in newspapers that a Michigan specialist had discovered beyond a doubt "the most scientific and comprehensive treatment for the cure of sexual weakness, etc" This treatment is "sent free to all who apply in writing" In response to any letters received a number of formulæ with directions for taking medicines are sent to the prospective patient This is as far as the free treatment goes At the time of forwarding the prescription the patient is also informed that the company has forwarded to his address a complete treatment by an express company, to be delivered c o d for $3 00 plus the expressage The patient is also told that the charge for these medicines is less than the local druggist could prepare them for and at the same time the medicines are composed of the freshest and purest drugs The company does not exactly obligate the patient to take the medicines, but the conditions are such that the patient is led to believe that it is decidedly to his advantage to accept the company's offer From the method of doing business it can readily be seen that the company has no information relative to the disease with which the patient is afflicted, and, as a matter of fact, all diseases are treated with identically the same mixtures The following is a list of the prescriptions employed by the company

PRESCRIPTIONS SENT OUT IN RESPONSE TO LETTERS ANSWERING ADVERTISEMENTS			COMPOSITION OF PILLS USED IN TREATMENT OF PATIENTS		
Formula 1			Formula A		
Ext gentian	gr	1/2	Zinci phos	gr	1/10
Ext nucis vom	gr	1/10	Ext nucis vom	gr	1/10
Ext saw palmetto	gr	1	Ext saw palmetto	gr	1
Ext damiana	gr	1/2	Ext. muripuama	gr	1/2
Hyoscine hydrobromate	gr	1/200	M et ft tab No i s c		
M. et ft pil No i, s c					
Ft No xxx Sig Take one pill after breakfast daily					
Formula 2			Formula B		
Muriapuama	gr	1	Ext damiana	gr	1
Ext tritici	gr	1/2	Black Indian hemp	gr	1/4
Ext. sombul	gr	1/2	Ext nucis vom ..	gr	1/10
Ext. quassia	gr	1/2	Ext. buchu	gr	1/4
M et ft pil No i, s c			M et ft tab No i, s c		
Ft No xxx Sig Take one pill after supper daily					
Formula 3			Formula C		
Aloin		60/407	Aloin		60/407
Sugar		280/407	Sugar		280/407
Blaud's mass		175/407	Blaud's mass		175/407
Glycyrrhiza		280/407	Glycyrrhiza		280/407
M et ft. tab No i, s c.			M. et ft tab No i, s c		
Ft No xxx Sig Take one tablet at bedtime					
Formula of Special Treatment.			Formula D		
Strych. sulph	gr	1/200	Strych. sulph	gr	1/200
Quininæ sulph	gr	1/16	Quininæ sulph	gr	1/16
Ferri reducti	gr	1/2	Ferri reducti	gr	1/2
Arsenious acid	gr	1/200	Acidi arseniosi	gr	1/200
M et ft tab No i, s c.			M. et ft tab No i, s c		
Ft. No xxx Sig Take one tablet just after each meal					

The above formulæ show, first, the differences between the medicines made according to formulæ sent would-be patients and the medicines actually used, second, that the several formulæ contain nothing but well known drugs, and, last, that the same or similar mixtures are used by most specialists in the treatment of male diseases

At the time of the hearing the physician representing the company was asked for information respecting certain claims made by the company and in reply many interesting points were brought out. The literature represented that this firm had a novel way of developing the organs free, which consisted of a so-called "Developing Lymph, which is now very widely used in Europe and is finding staunch adherents in this country as well" The physician admitted that the company was not in possession of any lymph and to the best of his knowledge the representation was not correct. When asked for information relative to the claims made that the treatment was new and novel, and to show wherein the treatment was new and novel, he stated that his firm was the first to introduce muriapuama and hyoscine hydrobromate to the medical profession When informed that muriapuama was brought to the medical profession's attention before the existence of the company he was unable to make further reply, and when his attention was also called to the fact that hyoscine hydrobromate had been known to the medical profession nearly twenty-five years, and prominently brought forward by Dr Wood in 1884, he had no defense to make

Before closing this item it seems desirable to note a few clauses of the suggestive literature used

> Unhappy Homes caused by Weakness in Men. There are thousands of cheerless homes in this country filled with discontent and unhappiness, lacking in love and companionship through the sexual weakness and physical impairment of a man It (the medicine) creates an immediate social feeling of warmth and good nature, forces active blood to the muscular tissue, tones the nervous system and arouses bodily confidence.

DR STEVENS & CO , COLUMBUS, OHIO

The following are illustrative statements of this company's literature

> A new, scientific method of treatment for diseases of men Ten Days' Free Treatment Offered Men Treatment absolutely free to every man It is no "prescription," "deposit" or "C O D" scheme In addition to the absolutely free trial treatment, they send the most complete book ever written on the Diseases of Men, telling all, and fully illustrated with forty engravings from life After twenty five years of scientific investigation we have discovered and developed the "Paris Food" and crayon treatment.

The wonderful method is claimed to have been discovered by the company's physician after long search and experimentation

> One of our physicians continued his researches in the city of Paris France, assisted in his researches by a noted chemist, and finally succeeded in perfecting the "Paris Food" treatment

The points claimed to be novel in the treatment employed by this company consist in the application of medicinal agents directly to the parts affected by means of crayons, bougies, and urethral suppositories, the introduction of numerous new medicinal combinations and the use of the "Paris Electro-Medicated Crayons" The formulæ submitted were no less than twenty-seven, all of which are claimed to be used in the treatment of the company's patients Some of the formulæ had specific names attached to them, such as "Gonorrhea Crayons," "Aphrodisiac Crayons," "Bougies," "Urethral Suppositories," "Bougie Ointment," "Rubefacient Ointment," "Pills" and "Tablets"

It was admitted at the hearing that the method of treatment was scientific but not new The local application of medicinal remedies by means of bougies, suppositories and crayons has been used for many years In the early sixties it was common for pharmacists to issue catalogues enumerating various kinds and forms of suppositories The base employed by this company, namely, cacao butter, is not novel, inasmuch as it was introduced as early as 1852 and has been continually used since for the purpose of incorporating medicinal agents which are to be applied locally Bougies, urethral suppositories and vaginal suppositories, all of which are frequently called crayons, have been public property for many years In 1886 Messrs John Wyeth and Brother, manufacturing chemists, issued a pamphlet on suppositories which contains numerous cuts and formulæ of the many suppositories then in use It was clearly shown that Dr Stevens & Company was not the originator of this form of medicinal treatment and that it was not the result of years of experience and the expenditure of thousands of dollars on the part of Dr Stevens & Company that brought this form of treatment into existence, inasmuch as it had been in vogue many years before the company was organized

The firm also contended that the combinations employed were new and novel None of the formulæ submitted, however, contain anything but well recognized drugs The special formulæ submitted may differ slightly in the number of ingredients and quantities from those prescribed by physicians of standing for patients similarly afflicted, and if such a difference could be called new and novel then some of these formulæ would come under that designation The advertising literature also represented that the ingredients employed were rare and costly and had been used in the treatment of disease only for a few years When the company was requested to point out the justification of this statement no satisfactory response was offered The cuts employed in the literature also represent that some of the crayons employed are electrified and it is even stated that these crayons were "subjected to a strong current of electro-ozone," which makes them "act like a mild electric current" When the physician representing the company was informed that there was nothing recognized in the scientific world as a "current of electro-ozone," nor was it specified in any portion of the directions accompanying the formulæ for the manufacture of the remedies that these crayons were to be submitted to a "current of electro-ozone," and when asked for an explanation he simply evaded the question by answering that he had no knowledge of such an electrification and was not aware that the representation was made in the company's literature.

One of the remedies brought out by this company is the "Paris Food," which is claimed to be new, costly, and rare, and largely employed by European physicians The formula submitted for this preparation is the following

PARIS FOOD OINTMENT

Lanolin	4 oz.	Menthol	205 gr
Benz lard	4 oz	Cerasin	1 oz.
Water	4 oz	Oil wintergreen	160 min.

When the physician was asked to point out the active ingredients in this remedy he indicated that menthol and oil of wintergreen were probably the most active, aside from the massage necessary in applying the ointment to the organs It was ultimately admitted that "Paris Food" possesses practically no more virtue in the treatment of male diseases than ordinary cold cream

Another very interesting feature employed by this company is found on a small brown envelope, which reads as follows

> This envelope contains a strip of medicated paper The properties of this slip are such that when it is dipped in the urine and dried, it can be chemically and microscopically analyzed and will show the stage of your disease

The strip of paper is ordinary blue litmus paper and is therefore not a medicated paper It is furthermore not within the power of any chemist or microscopist to analyze a strip of litmus paper when dipped in the urine and by this means to determine the condition of the patient It is true the paper may indicate whether the urine is alkaline, acid, or neutral It is a well known fact, however, that urine voided by the same individual at different times during twenty-four hours may at one time be acid, at another time alkaline, and at times both acid and alkaline to litmus paper From this it can be readily seen that it is impossible for any one however skilled to make an examination of litmus paper that has been dipped in urine and by this means ascertain the stage of any disease It also developed that this company did not possess a laboratory, did not make either chemical or microscopic analyses of urine, and no one in its employ was competent to make such analyses

Some readers will probably wonder how pills, tablets and rubefacient ointments are used for local treatment The company condemns the internal treatment of drugs in its literature, but in practice such treatment is resorted to and is employed in the form of pills and tablets Some of the tablets contain one active ingredient, extract of capsicum, incorporated in sugar of milk The directions for using same are to dissolve tablet in glass of water and apply to penis The rubefacient ointment contains capsicum and is to be applied directly to the parts As a side issue this firm claims to "treat and cure" diseases of the eye and ear, consumption, hip-joint disease, heart disease, paralysis, piles, cancer, chronic dysentery, gravel, dropsy, etc The book referred to on the diseases of men, and used by this company in the furthering of its schemes, is one of the most immoral pieces of literature ever met with

"VITAL RESTORATIVE"

The English Restorative Company, Denver, employs under this heading two forms of pills, one consisting of licorice and extract of saw palmetto, and the other is a methylene blue pill The virtue of the former undoubtedly resides in the saw palmetto, which is claimed by some to be useful in the treatment of sexual decline The methylene blue pill is described below under the head of "Methylene Blue Fraud"

"VITALA"

Remedies under the above name are exploited by the Vitala Company, managed by "Dr Frederick Main," alias "Dr NaMorg," Jackson, Mich It is represented that the virtue of these medicines resides in a drug recently discovered in the Philippine Islands and tested by this firm. An investigation showed that the drug to which the name "Vitala" is applied, is *Caesalpinia Bonducella*. Common names for this plant in the Philippine Islands are "Nigger Nut," "Molucca Bean," "Calambit," and in Porto Rico it is known as "Mato Azul." The nut of this plant undoubtedly possesses valuable medicinal properties, inasmuch as it is recognized by the pharmacopeia of India. Its value, however, depends on its tonic and anti-periodic properties. It also appears to act favorably in affections of the digestive tract, especially diarrhea. There is no information available in literature which would indicate that this nut possesses any properties excepting those here enumerated. There is certainly nothing in it which could be considered as a cure-all for the numerous sexual diseases claimed to be cured by the Vitala Company.

A careful examination of the advertising literature employed by this company and the formulæ submitted fails to show conclusively that even this drug was used in the preparation of the medicines. The only existing evidence is the representation made in the formulæ submitted that in certain prescriptions a minim of "Tincture of Vitala" was used for each pill. Exactly what "Tincture of Vitala" is could not be definitely ascertained. The formulæ submitted by the company at different times show decided differences and the products were frequently not of the same composition as represented by the formulæ. Not only was the above inconsistency brought out, but on reviewing one of the medicines on which great stress was laid, namely, "Vitala Developer," it was found to be absolutely devoid of this wonderful medicine derived from the Philippine Islands both according to the literature of the company and the formulæ submitted. The composition of this "Developer" as submitted by the company is as follows:

FLESH FOOD—PHILIPPINE DEVELOPER.

Oil citronella	6 oz.	Hydrated lanolin	45 lbs
Menthol	6 oz.	Cerasin	2 oz.
Oleoresin capsicum	4 oz.	Lard	q s to 60 lbs

The above formulæ clearly shows that the lauded "Philippine Developer" contains nothing but old and well known drugs. The marvelous Philippine drug is absent. The mixture is a simple ointment whose activity undoubtedly resides in the oleoresin of capsicum. This agent is frequently employed as a counterirritant of the male organs in nostrums.

"VIGORO"

The claims made for this remedy are similar to those already considered. The medicine consists of extract of nux vomica, buchu, damiana, oleoresin capsicum and a phosphid. All of the above agents have been used for many years in the treatment of disease. There is therefore no basis for the statement that "Vigoro" is made from rare and expensive drugs. A pill of the above composition certainly would not cure syphilis, gonorrhea, gleet, hydrocele, varicocele or stricture.

"VITALITY PILLS"

This medicine is exploited by the Missouri Drug Company, St Louis. The representation is made that the "principal ingredient is an animal extract taken from healthy young bulls," which "gives man the vigor and vitality of the bull." On examination it was found that the pills were simply of the aphrodisiac type and could not accomplish anything except what pills of this general type are usually represented as being capable of doing.

"YOUSOF'S SALVE"

"Dr Yousof's Celebrated Turkish Ointment" is exploited by the Franklin Remedy Company, New York City. An examination of the sample submitted shows that it consists approximately of 80 per cent. petrolatum and 20 per cent. of a wax-like body, the mixture being flavored with rose geranium. The salve is simply to be applied locally to the generative organs.

METHYLENE BLUE FRAUDS

The chemical, methylene blue, is frequently used by nostrum mongers under some fanciful name for the purpose of frightening would-be patients as to the actual condition of their health. Methylene blue possesses the peculiar property of turning the urine green when passed through the human system, the shade depending on the amount of drug used.

The English Restorative Company, referred to under "Vital Restorative," in its literature to its patients advises the patient to watch the urine closely and if anything unusual is observed by him to forward a sample of the urine to the company in question and an examination would be made of the sample, from the study of which the condition of the patient would be diagnosed and treatment instituted accordingly. While methylene blue may be utilized to some extent in diagnosing the condition of certain patients, the method employed above is certainly fraudulent to a degree.

Dr L R Williams & Company, New York City, employs methylene blue in the treatment of lost manhood in the following manner. The methylene blue tablets, together with so-called "medicated cloths," are sent to the patient with instructions that after taking the pills, the "medicated cloths" should be dipped, at a suitable time after taking the pills into the voided urine, dried, and returned to the company. It is represented that when the cloths are received by the company they would be immediately examined and from the results obtained the patient's condition ascertained. The worthlessness of the procedure is indicated by the fact that the "medicated cloths" turned out to be simply strips of cheese cloth. In this connection it is only necessary to say that this procedure is absolutely valueless, inasmuch as it is not within the scope of the most skilful physician, chemist or pathologist, either singly or combined, to make such diagnosis as is represented above.

The Magic Foot Draft Company also employs methylene blue pills under the designation of "Magic Regulators." Those who doubt the magic part of this treatment can easily satisfy themselves by the simple test that goes with each box of pills, which is as follows:

> To prove the action of our Magic Regulators on the kidneys, the organs which in rheumatism are always diseased and fail to do their work, allowing the poisonous acids to accumulate and lay the foundation for a long and painful run of rheumatism, watch the color of the urine, etc., etc. If it assumes a light blue or bluish green color you may rest assured that the Magic Regulators are doing their work.

OBESITY CURES

The two most prominent are "Obesity Food" and "Rengo Fruit."

"OBESITY FOOD"

The ingredients of this remedy are [illegible] ground, bran [illegible] and toasted bread. In the literature sent out for advertising this "food" the following representations are made:

> These tablets are not a drug, but a food, and will agree with the weakest stomach Rapidly Reduces Fat without bad results Turns Fat into Muscle

Whatever virtue this remedy may possess certainly resides in the drugs present It is therefore unjustifiable to claim that the product is not a drug The representation that this "food" has the power of turning fat into muscle has no basis for existence whatever Nothing short of a miracle can turn fat into muscle There is no process of nutrition by means of which fat can be turned into muscular tissue, since muscular tissue is a proteid compound and not a fat.

"RENGO FRUIT"

It is claimed that the active constituents of this "fruit" are derived from a luscious, tropical fruit, which grows in clusters similar to grapes It was shown, however, that the "fruit" really consists of poke root, thyroid gland, cascara, cassia fistula, and confection of tamarinds The composition of the "fruit" apparently is well known to the promoters of this remedy Nothwithstanding this fact, however, the prospective patients are told that "Rengo Fruit" is not a drug or chemical preparation This feature is reiterated in another form

> Man has never found a "regulator" by mixing up concoctions of different drugs, he must consult Nature, and adopt what she furnishes

From the composition set forth above it can be readily seen that all the statements made are intended solely to mislead Whatever virtue this "fruit" may possess resides solely in the drugs employed in their manufacture

RHEUMATISM CURES

"MAGIC FOOT DRAFTS"

The following are quotations from the literature

> Magic Foot Drafts are known all over the world as the safest, surest and simplest cure for all kinds of rheumatism They cure when everything else fails Best of all, they cure to stay cured If 100,000 people from every State and Kingdom of the earth have been cured of rheumatism, of every kind and from whatever cause, by Magic Foot Drafts, can any prejudice exist in your mind to prevent your giving the remedy a fair trial?

No one reading these quotations can arrive at any other conclusion but that "Magic Foot Drafts" are capable of curing all forms of rheumatism "Magic Foot Drafts" consist of pieces of oil cloth, covered on the unfinished side, with a border of adhesive mixture, and the central portion with a plaster composed of the following

Poke root	30 per cent	Corn meal	8 per cent.
Pine tar	62 per cent		

These drafts are to be applied to the hollow of the soles of the feet and are claimed to effect cures in the following manner

> By cutaneous absorption curative elements are taken from the draft These are carried to the blood by the lymphatics, and neutralize the poisons It (Magic Foot Draft) stimulates the nerves to activity The nerves in turn act on the muscles, veins and arteries, increasing the circulation of the blood, compelling it to hasten and deliver up its poisons from the whole system to the sweat glands just beneath the skin, and from thence it is drawn by the Draft through the pores and absorbed Thus is effected a cure no matter where the pain is located because all the blood of the body passed through the capillaries

There is nothing whatever in these drafts to warrant such claims and representations They possess no curative element whatever, which when absorbed into the blood will neutralize the poisons which are supposed to be the cause of the rheumatism and in this manner effect a cure

A particularly interesting feature connected with this scheme is that the promoters when asked for reasons for their claims drew on the writings of the best authors of the country, such as the late J M Da Costa, Dr H. C Wood, Dr J V Shoemaker, Dr H A. Hare, the medical author of the "American Dispensary," and others These authors when informed relative to the use made of their writings vigorously protested, claiming that any interpretation of their writings which would in any way bolster up the schemes of the "Magic Foot Draft" was absolutely unjustifiable

"PLASTERS, ORDWAY'S"

It is only necessary here to call the reader's attention to the fact that the "Ordway Plasters" are claimed to cure rheumatism Details relative to these plasters have been given under "Consumption Cures in proper alphabetical order

"VIBRO DISCS" "VIBRO TABLETS"

The promoter of these remedies styles himself as "Prof S M Watson," alias "Professor Harraden," "The Greatest Hypnotist from Jackson, Michigan" This promoter is absolutely without medical knowledge and it also developed that he has been connected with a number of fraudulent schemes The claims made for this remedy are fully set forth in the following quotations

> There is nothing cheap about it, nothing inferior about it, as is mostly the case with remedies put forth in a spirit of quackery My tests of ingredients were simply numberless My outlays were constant and unsparing Almost every land and clime was laid under tribute to supply my laboratory with the right material and of the right quality I can not, of course, make known their ingredients publicly, but I will give you an idea how precious they are when I tell you that one of the number costs over forty dollars an ounce You will not find drugs of that class in any other remedy advertised for this disease I have made my remedies perfect, regardless of cost The absorbent material on my discs is not that of a common plaster It is prepared for its special work out of no less than twelve ingredients No other appliance on earth can equal it as a pain killer and absorbent of uric acid I alone possess the secret of using a galvanic appliance to root out the poison of rheumatism Vibro Discs, the only sure and permanent cure for rheumatism in the world to-day My treatment consists of Vibro Discs and Vibro Tablets, the former being for external use and the tablets for internal This is what may be called a double action, and science has amply shown that such double action is necessary to complete a cure.

"Vibro Discs" come in pairs of two distinct types One pair consists of a circular portion of ordinary oil cloth partly covered on one side with a resin plaster and on the other side of one of the pair is a small plate of zinc The other disc of this same pair contains a copper plate instead of a zinc plate Beneath the copper and zinc plates the oil cloth is perforated Externally each entire disc is covered with a piece of gauze

The second type of discs is similar to that just described except that the plates of zinc and copper and the gauze covering are omitted

Examination of the plaster covering one side of the discs shows that it is composed largely of some of the cheapest drugs employed in medicine, namely, burgundy pitch, resin, oil tar, sugar, poke root, kaolin, capsicum, and belladonna The directions given for the use of the "Vibro Discs" are that the pair of discs containing the metallic plates must be warmed separated from each other while warm, and applied to the soles of the feet before they become cool The second pair of discs is to be separated in the same manner and applied to the chief regions of pain Immediately after the application of the discs it is claimed

> A prompt alleviation of the pains will ensue The gentle glow that will speedily be felt in the veins is the token that vibration has begun and that the rheumatic venom is being loosed from its strongholds.

The reason given for the induction of this gentle glow and the speedy removal of the rheumatic venom is that an electrical vibration is communicated to the blood, the source of this electrical vibration being the two plates of copper and zinc, respectively, forming a part of the "Vibro Discs" The general principle employed of producing electricity by two different metals, is based on scientific facts but the conditions under which the discs are applied absolutely prevent the formation of any current of electricity The electric current is also claimed to be imbued with the power of causing the uric acid to be attracted to the discs and to be absorbed there

Some of the follow-up letters contain interesting arguments, as the following will show

> You know that the acid venom has been encrusting your joints, shriveling up the delicate nerve filaments, and eating away the tissues of your body It has been in your system for a long time, and each passing day it has dug deeper and intrenched itself more strongly In view of all these facts, which can not for a moment be disputed, do you think it anything strange that the uprooting of the poison should cause more or less of a wrench—that it would make you suffer even more than you did before you made any effort to free yourself from it? The continued pain you experienced, then, merely indicated that my Vibro treatment was doing its work—that the acid was being rooted out, and that your system was making an effort to throw it off

The "Vibro Tablets" do not appear to have been considered an essential portion of the rheumatic treatment at first, but it seems to have been found advantageous to introduce such tablets for internal use later The tablets are claimed to contain the following ingredients

VIBRO TABLETS

Macrotin	1/8 gr	Hydrated lanoline	45 lbs
Caulophyllin	1/8 gr	Cerasin	2 oz
Ext jaborandi	1/8 gr	Lard	q s to 60 lbs
Rhubarb	1/8 gr		

There is certainly nothing new in this mixture and only one agent is recognized as having any direct influence on rheumatic conditions

SKIN BLEACHERS AND BEAUTIFIERS

"COMPLEXION POWDER"

One of the agents used for improving the complexion was found on analysis to consist entirely of Rochelle salts Another product sold under the designation of "Complexion Tablets" was found on analysis to consist of reduced iron, plant extractive and strychnin An unfortunate incident connected with this case was that the remedy was not marked so as to set forth its poisonous nature, and a mother into whose possession the remedy came carelessly placed it within reach of her two and one-half year old child, with the result that the child consumed a number of the tablets and died from strychnin poisoning It was contended that the tablets did not contain strychnin but that extract of nux vomica is used in their preparation

"FACE LOTION"

The most interesting "beautifiers" met with are usually sold under the name of "Face Lotion" The chief active agent found in the samples so far submitted is corrosive sublimate, which is usually dissolved in water containing an indefinite quantity of glycerin, the whole being flavored with a suitable amount of tincture of benzoin These lotions beautify by destroying the tissue with which they come in contact, causing it to peel off and thus bringing to view the lower layer of the epidermis, which is smooth and pink-like in appearance

MISCELLANEOUS

"AQUAMIEL."

The Mexican Remedy Company exploited under the above name a mixture which it represented as follows

> The Miracle of Nature Magical Bust Developer and the most marvelous flesh producing, blood-enriching, tissue-forming preparation the world ever knew Permanent Development Guaranteed. Aquamiel is a product of the famous Maguey Plant of Mexico

A number of interesting pictures accompany the advertising literature showing the remarkable results of this remedy In one of the best testimonials submitted the patient said she believed that her breasts had increased in size one-quarter of an inch. An investigation of the remedy showed that it consisted of two solutions of different strengths, one of which contained 8 per cent alcohol and the other 2 per cent alcohol, both of which were sweetened with saccharine and colored with caramel, a small amount of plant extractive was also present The medicine is absolutely worthless as a tissue developer, and any chemist can prepare it in any laboratory without the least difficulty

"ELIXIR OF LIFE"

This preparation was also sold under the name of "T Duffy's Solution," with headquarters at San Francisco An analysis of a sample gave the following results

	Per cent.		Per cent
Water	99 611	Non volatile matter	0 389

The "Elixir" is therefore nothing but an extremely weak mineral water, the non-volatile matter of which consists of potassium chlorid, sodium carbonate, sodium bicarbonate, calcium sulphate and a trace of lithium chlorid It is heralded as being a most valuable remedy for many affections Among the many representations made the following is typical

> The Solution cures all Germ and Contagious Diseases, destroying and annihilating them

"15 MINUTE PILE CURE"

The Dr Artz Medical Company, St Paul, Minn, is credited with being the manufacturer and distributor of this remedy The ingredients employed in its manufacture are zinc oxid, menthol, carbolic acid, simple cerate, chaulmoogra oil, and oil of sweet almonds The mixture was found to be free from narcotics and opiates as claimed

It was represented that the value of this ointment resided in the chaulmoogra oil, claimed to be a new principle A search of literature failed to reveal anything which would justify such a claim for chaulmoogra oil The advertising literature of the company contained numerous misleading and deceptive statements, of which the following are typical

> It is a positive and permanent remedy, tested in twenty thousand cases in the German Army before being given to the world as a positive and specific cure Pronounced by the medical profession the most wonderful discovery of modern science.

"LIQUID ELECTRICITY"

Under this name a number of mixtures are sent out from which teas are to be prepared and taken according to directions The most important active constituents in the mixtures are powdered capsicum, essential oils, iron sulphate, and belladonna leaves

It is represented that with teas prepared from such mixtures it is possible to cure consumption in a few days The remedy is also styled an "Electric Cough and Consumption Cure,"

> It kills the microbes of bilious, malarial and other fevers, germs of consumption or cancer Will annihilate the virus of blood disease, remove all offensive odors, destroy all animal and vegetable poisons

"RADIUMITE"

The following are quotations from the literature

> Nature's Gift to Mankind The Mystery of Its Powers Puzzles and Bewilders Scientists Radiumite is a Puzzle to Leading Chemists Keeps you well while you carry it Some of those who carry the stuff for warding off disease swear by its virtues, and I know of a number who declare they have been cured of nervousness and stomach troubles through its agency They have the same faith in the mineral that many have in the rheumatism ring and the buckeye, and other such agencies It is a well known fact that many eminent French chemists carry radium in their pockets and have great faith in its curative properties

Directions for using "Radiumite" are as follows

> Carry one or two pieces of the Radiumite in your pocket, or, encase it in a silken or chamois bag and wear it about the waist or suspended from the neck.

These quotations clearly set forth the manner in which "Radiumite" is supposed to cure The advertising literature leads to the belief that "Radiumite" will cure diseases of the stomach, kidneys, liver, bowel troubles, rheumatism, cancer, etc

Examination of the mineral submitted showed that it did not possess any radium or radio-activity It was, however, pyrophosphorescent, that is, when the ore was submitted to friction in the dark it became slightly luminous Ores of this character are well known and the one under consideration consisted of zinc sulphid and lead sulphid, with a certain amount of gangue It seems hardly necessary to say that this ore does not possess any curative properties whatever

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THE CURE OF PSORIASIS, WITH A STUDY OF 500 CASES OF THE DISEASE, OBSERVED IN PRIVATE PRACTICE *

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Psoriasis is well known to be one of the most obstinate of all diseases of the skin, discouraging alike the physician and patient, and one which often persists for many years, or recurs, in spite of various attempts at cure. While under proper and energetic local treatment, it is often possible to remove the existing lesions in a shorter or longer time, the tendency to a recurrence of the eruption is so strong that some have regarded the disease as incurable, and too often have only attempted to give relief to the cutaneous symptoms present, principally by local means

It is to be noticed that writers who base their judgment on cases seen in public practice, and who dwell principally on the local treatment of psoriasis, speak most discouragingly in regard to the possibility of its permanent cure, while certain others, who study the disease in its broadest aspects, express the most hopes of ultimate recovery

In order to understand the disease better I have looked over my records of cases of psoriasis seen in private practice during the last 35 years, and have had them analyzed in several particulars, which will be presented later The total number amounts to 509 separate cases seen among 14,120 patients with miscellaneous diseases of the skin This makes the percentage of psoriasis to be 3 6, which is somewhat smaller than that I reported some years ago [1] The difference is probably due to the exclusion of cases of dermatitis seborrhœica (which may often resemble psoriasis) both of late years, and from older records of cases in which the history seemed to point to this affection, so that the cases here analyzed are all undoubtedly of the disease under consideration

This proportion is a trifle larger than that observed in public practice Thus, of 48,132 cases of miscellaneous skin diseases treated at the New York Skin and Cancer Hospital during the last twenty-two years there were 1,597 of psoriasis, making a percentage of 3 3, this varied in different years from 2 2 to 4 per cent. In private practice the males outnumbered the females, there being 295 males, or almost 58 per cent, to 214 females, or 42 per cent. In public practice the females were slightly in excess, 806 males and 791 females

TABLE 1

AGE AT TIME OF CONSULTATION

Age	Private Practice			Public Practice			Grand Total
	Male	Female	Total	Male	Female	Total	
Under 5 years		2	2	5	6	11	13
From 5 to 10	3	11	14	24	62	87	101
From 10 to 15	6	9	15	46	79	125	140
From 15 to 20	25	42	67	65	114	179	246
From 20 to 25	34	44	78	114	135	249	327
From 25 to 30	48	41	89	146	129	275	364
From 30 to 35	53	23	76	136	88	224	300
From 35 to 40	46	12	58	87	40	127	185
From 40 to 45	27	5	32	66	42	108	140
From 45 to 50	23	6	29	41	40	81	101
From 50 to 55	13	6	19	29	20	49	68
From 55 to 60	6	5	11	22	11	33	44
From 60 to 65	4	6	10	16	11	27	37
From 65 to 70	3	2	3	5	3	7	12
From 70 to 75	2		2	5	2	7	9
From 75 to 80 (78)	1		1	2		2	3
Unknown age	1		1		6	6	7
	295	214	509	806	791	1,597	2 106

In looking at Table 1 we see that psoriasis comes for treatment at all ages, there were two patients under 5 years of age, the youngest being a female child of 2 years, the oldest patient was a male aged 78 when applying for treatment But by far the largest number were first seen between the ages of 15 and 35, 310 in all, over 60 per cent., and the most in any quinquennium were in the period between 25 and 30, 89 patients

Of more interest, however, is Table 2, which shows the age at which the eruption was first developed Here it is seen that the skin lesions may begin at a very early age, the youngest recorded at 4 months, and in all 30, in whom it appeared before the age of 5 years, almost

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* Read in the Section on Cutaneous Medicine and Surgery of the American Medical Association at the Fifty seventh Annual Session June 1906

[1] Clinical Study and Analysis of 1 000 Cases of Psoriasis, Trans First Internat. Dermatol Cong Paris 1890 p 879

6 per cent of the whole, there were 52 cases, or 10 per cent., in which the eruption was first noticed between the ages of 5 and 10 years a total of 82 cases, or 16 per cent, before the age of 10 years, this, however, differs from the statement of Neumann[2] that the eruption generally appears about the sixth year of life It will be noticed that the eruption was recorded as appearing most frequently between the ages of 15 and 25, 190 cases, or 95 in each quinquennium, curiously enough, also, the numbers of males and females were exactly alike in each period of five years It will be also noticed how very seldom it first developed after the age of 55, only 5 cases

TABLE 2

AGE AT FIRST APPEARANCE OF PSORIASIS

	Male	Female.	Total
4 months	1		
Under 1 year	3		3
From 1 to 2 years	2	3	5
From 2 to 3 years	2	6	8
From 3 to 4 years	1	3	4
From 4 to 5 years	3	7	10
From 5 to 10 years	21	31	52
From 10 to 15 years	25	50	75
From 15 to 20 years	57	38	95
From 20 to 25 years	57	38	95
From 25 to 30 years	30	15	45
From 30 to 35 years	28	7	35
From 35 to 40 years	22	6	28
From 40 to 45 years	10	4	14
From 45 to 50 years	7	8	15
From 50 to 55 years	5	3	8
At 56 years		1	1
At 59 years		1	1
At 61 years		1	1
At 63 years		1	1
At 64 years		1	1
Unknown	10	2	12
	283	226	509

That psoriasis is a chronic and rebellious disease is seen in Table 3, which exhibits the duration of the eruption before coming for treatment. While there were a few cases in which the patient was seen some weeks or months after it had first appeared, it will be observed that in a very large number of instances, 118, the eruption had already existed between one and five years, and in a still larger number, 123, it had first developed between five and ten years before the record was made The diminishing numbers after this period do not by any means indicate that the eruption may not last even longer than the highest period mentioned, fifty years, for we know that it frequently does continue till death It only shows that after the eruption has lasted many years, perhaps with intermission, the patient no longer attempts to get relief, hence the small number seen after a duration of twenty to twenty-five years

TABLE 3

DURATION BEFORE TREATMENT

	Male	Female.	Total
Under 1 year	42	38	80
From 1 to 5 years	68	50	118
From 5 to 10 years	60	63	123
From 10 to 15 years	45	30	75
From 15 to 20 years	30	20	50
From 20 to 25 years	22	8	30
From 25 to 30 years	9		9
From 30 to 35 years	5		5
From 35 to 40 years	3	1	4
From 40 to 50 years	2	1	3
Unknown	10	2	12
	296	213	509

PROLONGED TREATMENT NECESSARY

Patients with psoriasis are proverbially restless under treatment, and continually wander from one physician to another, visit mineral springs, and try about all the quack remedies It is very hard to hold them to a strict régime of diet and hygiene, and internal medication for a length of time, and they even tire of the local treatment when it is not rapidly beneficial With a return of the eruption they naturally seek other help

In Table 4 is exhibited the duration of observation and often irregular treatment of the cases analyzed It is here seen that 108 cases were seen only once, many of them in consultation, and 68 for one month or less, a total of over one-third of the whole number, while of the cases which were treated at all there were 231, or nearly one-half that were under treatment for only one year or less This, as will be seen later, is far less time than is necessary to overcome the tendency to the disease Of the 170 cases, or 33 per cent. that were under observation for a period of over one year, my records show that very few of them pursued treatment faithfully and continuously for a lengthened period of time, but were seen now and again, as fresh eruptions or other reasons led them to seek medical advice It will be noted that some patients were under observation for very many years, and in certain instances in which it was possible to carry out efficient treatment, general and local, the permanent results have been very satisfactory But with the uncertainties of an office and consultation practice it is evidently impossible to make any definite statements in regard to permanent cures, in a limited number of cases, however, that have been heard from or seen from time to time, it is believed that the tendency to the disease has been eradicated by complete, prolonged treatment, the patients remaining free from eruption

TABLE 4

DURATION OF OBSERVATION OF CASES

	Male.	Female	Total
Seen once	75	33	108
1 month or less	43	25	68
1 to 2 months	16	17	33
2 to 4 months	12	20	32
4 to 6 months	16	14	30
6 months to 1 year	36	32	68
1 to 2 years	21	20	41
2 to 3 years	16	14	30
3 to 4 years	6	5	11
4 to 5 years	9	1	10
5 to 10 years	18	20	38
10 to 15 years	9	14	23
15 to 20 years	4	5	9
20 to 25 years	3	2	5
25 to 30 years	2	1	3
	286	223	509

It is not surprising that psoriasis should be rebellious, and the eruption apt to recur, when we compare it with certain other diseases whose chronic character is accepted, but which are known to be amenable to prolonged treatment, perfectly directed in every respect It is within the memory of many of us when syphilis was regarded as incurable, and when physician and patient were content to meet and remove symptoms as they recurred, and we were constantly seeing patients with this disease presenting repeated lesions, even for many years But now the laity, as well as the profession, have pretty well accepted the fact that proper and sufficiently prolonged treatment will eradicate syphilis, and we no longer have presented to us the sad and distressing late ravages of the disease, in the frequency with which we met them some years ago But this change has been accomplished only by recognizing and accepting the fact that the patient must submit to a continuous course of treatment with intermissions, perhaps, but only as directed by the physician, for at least two years and often for three or more years, and also that faithful treatment is necessary as early in the course of the disease as possible Or, take the case of gout and rheumatism There are certainly fewer individuals with the severe chronic forms of these diseases than formerly, because patients have learned from physicians that they must take prolonged treatment, and guard their mode of life during a considerable period, or even indefinitely, if they wish to escape from these troublesome and rebellious affections The same may be said of chronic bronchitis and asthma, and sufferers from these maladies go to infinite pains in many directions, including great climatic experiments, in order to get relief All are familiar with the satisfactory results which can often be obtained in diseases of the hip and spine by prolonged proper treatment, constitutional and local

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[2] 'Lehrb der Hautkr Wien 1873 p 250

In regard to some affections of the skin it is likewise recognized that greatly prolonged treatment, and careful dietary and hygienic measures may be necessary in order to overcome the tendency to the eruption Thus, eczema will often persist continually, or with exacerbations, for years, until by proper, faithful, and persistent medical supervision, perhaps for years, the susceptibility to its recurrence is conquered The same may continually be observed in regard to acne, which has persisted into adult life, and also with regard to urticaria All of these illustrations apply to the proper treatment of psoriasis For, while we are not yet prepared to state the exact nature of the disease, or the immediate underlying causes of the eruption, any more than we can of eczema or some other general disease, we know enough of the clinical history and many other matters, to enable us to assert the soundness of such a deduction

TABLE 5

HEREDITY, 500 CASES

Psoriasis	Father	Mother	Patients.	Per cent.
Patients with anterior heredity	28	40	47	09
	Sons	Daughters.	Patients	
Patients with posterior heredity	8	10	18	08
Described as family disease			9	01
Neither anterior nor posterior heredity			308	60
Heredity unknown or unrecorded			127	25
Patients			500	
	Father	Mother		Patients
Having parents with psoriasis	25	16		41
	Grandparents on			
	father s side	mother s side		
Having grandparents with psor	3	3		6
	Sons	Daughters		
Having children with psor	8	10		18
	Brothers.	Sisters		
Having brothers or sisters	30	28		58
Gout and rheumatism	Father and father s father	Mother and mother s father		
With anterior heredity	17	12		20
Eczema and dermat seb	Father	Mother		
With anterior heredity	14	14		28
	Brothers	Sisters		
Having brothers and sisters	6	8		14
Asthma	Father	Mother		
Having parents with asthma	2			2

Psoriasis is not a local disease of the skin as is epithelioma Psoriasis is not a parasitic disease of the skin in the ordinary acceptance of the term, as has been abundantly shown by the conflicting studies of many observers Psoriasis is not a self-limited disease of the skin, when once developed it has no natural tendency to disappear, while the patient remains in the same condition of life Psoriasis is not permanently curable by local treatment alone, and if we ever hope to overcome the disease, it must be by measures of some kind other than local

IS PSORIASIS HEREDITABLE?

Psoriasis is often spoken of as an hereditary affection but a study of the recorded histories here analyzed of the more intelligent class of patients in private practice seems to show that this is not an important feature in any proportion of the cases, as is shown by Table 5

Thus in 305 cases or 60 75 per cent concerning which inquiry was made there was no anterior or posterior heredity and in 127 instances no statements were recorded If we allow that 60 per cent of these latter, or 76 patients, had also no hereditary history, it makes a total of 384, or over 75 per cent, in which the disease showed no hereditary influence Of the patients in regard to whom any anterior hereditary influence was observed, there were only 41, or 09 per cent who had 25 fathers and 16 mothers affected, and six who had three grandfathers and three grandmothers affected, of those with posterior heredity, there were only 18, 8 of whom had sons and 10 had daughters affected There were also 58, 30 of whom had brothers, and 28 who had sisters affected In regard to 9 patients it was recorded that psoriasis was a "family disease" It is not possible at present to state how many children of psoriatic patients escaped the disease, as these were not tabulated, but from casual inspection of my notes, and from memory, it can be confidently stated that there were many hundreds, many of them coming to advanced years, who never showed any signs of the disease

It is recognized, of course, that these figures are not as absolutely reliable data in regard to the hereditability of psoriasis as could be desired, for naturally the knowledge or memory of the patient or friends can often be at fault and frequently very searching and accurate questioning is not made But as they relate to patients in the higher walks of life, in private practice, and as full and careful notes have been preserved in regard to every case it may be pretty well accepted that the disease shows hereditary influence in not over one-quarter of the cases This proportion might readily be expected when we consider that parents and children are commonly under the same influences of climate, hygiene, diet, and whatever may tend to produce the disease It is, however, so constantly observed that many children in a family will escape, and only one be affected, that it is evident that true inheritance does not play a great part in the genesis of the eruption It is reasonable to suppose that when the disease does exist, a tendency to it may be hereditarily transmitted, as other tendencies and peculiarities are handed down through generations I am inclined to believe that as in eczema, gout, asthma, tuberculosis etc, it is a weakness of tissue that is inherited, which renders it susceptible to the true exciting causes of the eruption rather than any specific disease element which is hereditarily transmitted

ETIOLOGY

When we come to consider what is the real cause of the eruption we are confronted with a difficult task, for as yet no accurate studies have afforded an adequate answer The eruption has been carefully studied microscopically by many competent observers, but thus far these studies throw no clear light on the true nature of the disease Great activity is found in the epithelial elements of the skin with rapid keratinization, but there is also dilation of the blood vessels in the papillary layer, even in a very early stage, while later, there is perivascular cell extravasation, even deep in the corium and observers are not agreed as to which occurs first, in point of precedence Many claims have been made of a parasitic element but no specific organism has yet been demonstrated, only such as are commonly found on the skin, more or less modified by their surroundings

It is reasonable to suppose that there are many causative elements concerned in the production of the eruption in psoriasis as in other skin affections, and I am prepared to accept a micrococcic agent as one of the direct exciting causes of the separate lesions for, it must be acknowledged that their clinical appearance and mode of development and extension all strongly resemble the results produced in the skin by the trichophyton It is also not a little striking and impressive that most of the local remedies of value in psoriasis are such as have decided parasiticidal action Chrysarobin was first used, in the form of Goa powder, for ringworm

But, as stated, no specific parasite has yet been demonstrated, and we have to fall back on the pathogenic effect of some of the many ordinary cutaneous micro-organisms, which are almost omnipresent even as we see the lesions of scabies and eczema becoming pustular, in certain subjects whose tissues afford a proper nidus for the coccus, which does not seem to affect other skins For we know that micro-organisms which are ordinarily harmless may take on pathogenic action under suitable circumstances When, therefore, the skin by inheritance is peculiarly liable to such invasion, and ready to take on diseased action, the micro-organisms which are continually lodged in the skin (as is evident from many experiences relating to surgery), excite the changes of psoriasis in the epithelial cells, if all other conditions are favorable

Exactly what all these other conditions are it is impossible to state, for neither clinical nor laboratory work has as yet demonstrated just where the fault lies But there are many features connected with the disease which seem to point to a constitutional state or condition which, at one time or another, favors the development of the lesions, and which can not be ignored Thus, the intermittent character of the eruption, often without treatment, shows some change in the individual which even on the theory of a microbic origin of the lesions, causes the omnipresent micro-organisms to have effect The same may be said in regard to the well-known proclivity of the eruption to appear at certain seasons, at which we know that the diet varies greatly, as well as the mode of life, all of which may modify greatly the metabolic processes on which the state of the tissue depends

Most writers speak of psoriasis as occurring in persons in the best of health, but from a study of many cases in private practice, often over long periods of time, I am convinced that this is not the case, and that there is always some departure from the normal which can and should be discovered and reached if the disease is really to be cured In many instances the eruption depends wholly on pure debility, and a prolonged and most careful tonic course, with iron, etc, will ultimately overcome the difficulty In the gouty and rheumatic class of cases undoubted benefit results from a protracted and faithful alkaline course of treatment, with such dietary, hygienic and medicinal measures as meet the underlying blood state In a certain proportion of cases a strumous habit will be at the bottom of the trouble, and cod-liver oil, phosphates, etc, will be needed, occasionally with alterative doses of mercury

It would be possible to demonstrate all these points by illustrative cases, but time forbids But I may state that it is only by the most careful study of everything pertaining to the life and health of the individual, and by complete and repeated note taking over periods of time, that the real condition of psoriatic patients can be understood and properly treated as, indeed is true of many other chronic complaints and I am sure that if this were habitually done, these matters would be as evident to others as they have been to me for many years

Some writers claim that the disease is only a very late manifestation of syphilis, either acquired or inherited, and it is, indeed, surprising how a well defined psoriasis will sometimes melt away under efficient mixed treatment, or under iodid of potassium alone But I can not share in this view of psoriasis, and recognize in such therapeutic results only a modification of the faulty metabolism induced by these remedies, even as eczema in children will often yield so remarkably to the proper use of calomel and soda

From constant study of these cases I am convinced that faulty metabolism is at the bottom of psoriasis, and I believe that sufficient care can commonly demonstrate this in a considerable proportion of patients The urine is a most important and valuable indication of the manner in which metabolism is carried on, and should be frequently and completely investigated in psoriatic patients I do not refer to the discovery of sugar or albumin, but to a perfect knowledge of its relative and absolute quantity, its volumetric acidity and specific gravity at various times, and the exact amount and character of its many possible ingredients, etc Deficient and defective urinary secretion will explain very many otherwise obscure and rebellious conditions of the system it is understood, of course, that it is not believed that the kidneys themselves are necessarily at fault, but that the condition of the urine affords an indication as to how the metabolic processes have been previously carried on in various parts of the system

This is a very large subject and can not be entered on further at this time, and I must refer to what I have already written on the subject.[3] But I will briefly refer to two very striking cases which have recently been under my care A woman, weighing 163 pounds, with inveterate psoriasis, had passed only 13 ounces of urine the day before her visit, and at times has passed as little as 11 and even 7 ounces in the 24 hours, and yet was thought to be and appeared in perfect health Another, a young woman, aged 21, weighing 138½ pounds, who had had psoriasis eight years, passes at times enormous amounts of urine, with great frequency and urgency day and night, and again a scanty urine of a specific gravity of 1,041 (no sugar), and an acidity, as measured, of almost four times the normal degree, and with 4 3 per cent. of urea, over double the normal amount. Surely the perturbations of metabolism manifested in these two patients can not be without effect on the condition of the skin Moreover, the effect of intelligent treatment, dietary, hygienic and medicinal, on these and other patients, has demonstrated to a nicety that there is an intimate relation between metabolic conditions and the eruption on the skin

Very recently, at the New York Skin and Cancer Hospital, one of the most rebellious and distressing cases of psoriasis that I have ever seen, has changed in a remarkable manner by internal treatment along metabolic lines The patient, a woman, aged 32, has had characteristic psoriasis for very many years, and has been in the hospital for months at a time, the disease resisting every conceivable form of treatment A month ago, when the eruption had affected almost the entire surface, many large areas suggesting dermatitis exfoliativa, she was given four drops of strong nitric acid, internally well diluted, three times daily after eating The good effects were apparent very soon and the eruption has steadily faded, leaving most of the surface in a normal condition, and this with relatively little of the same, rather mild, local treatment which she was previously using without effect What the ultimate results will be can not yet be judged, but, in all my experience I have never witnessed such a startling result from a single internal therapeutic measure in psoriasis *

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[3] "Relation of Diseases of the Skin to Internal Disorders," Rebman & Co New York 1906

TREATMENT

The treatment of psoriasis, as may be judged from what has preceded, may cover a very wide range of measures, and it is readily understood why arsenic is not always successful in controlling the disease And yet arsenic is considered by many as about the only remedy in this disease, and assuredly, in certain cases it will often control the eruption in a very satisfactory manner Its mode of operation is by no means fully understood, although it is commonly credited with having a more or less definite action on the epithelial elements of the skin This may be so, but to my mind it is more logical to explain its effect through the agency of the general nutrition for arsenic is equally recognized as a nerve tonic, controlling chorea and neuralgia to a marked degree, and is also of value in chronic malaria and in many conditions of debility

The internal remedies which may, at one time or another, be used with advantage in the treatment of psoriasis, embrace a fair proportion of these in the Pharmacopeia, and it is impossible even to mention the many which from time to time have been brought forward The truth is that each and every one of them has probably been of service in one or more cases, which happened to be suitable for it at the time

It is here that the correct treatment, looking toward a cure of psoriasis comes in namely, in studying the patient at each visit, and determining the proper line along which to operate at that particular time, for undoubtedly constitutional conditions change from many ses, and treatment should be varied accordingly

Moreover, it is well to remember what was said a while ago in regard to the obstinacy of the disease, and the length of time often required to overcome syphilis and many other chronic conditions In my judgment there are many failures in psoriasis which are due to irregularity and intermissions in the constitutional treatment, or cessation of the same Although the eruption of psoriasis may often be removed relatively easily by local measures the patient is by no means cured, and it is often a disadvantage to have the eruption too quickly removed by local means, as it renders the patient careless and unwilling to pursue the dietary, hygienic, and medicinal treatment long enough to effect a cure

As may be inferred from what has preceded, I have no single remedy or treatment to present or advocate, nor do I believe that such will ever be found for there is no specific element to overcome, as in syphilis and malaria, nor any parasite that can be eliminated, once for all, as in scabies and favus But I do plead for a more careful and prolonged study and control of the psoriatic patient, in all particulars, and such a regulation of the life and such a use of all the measures known to the science and art of medicine, as shall suffice to change the constitution to that degree that, although the eruption may possibly threaten at times, it need never prove a serious matter and, as before stated, I believe that this can be done in a very much larger proportion of cases than has hitherto been generally believed and accomplished, and that even the tendency to the eruption can often be entirely overcome

As in the case of gout and chronic bronchitis, the psoriatic subject must recognize the existence of a disease of deep-seated nature, which will require the best efforts of the physician and patient, over a long period of time, in order to have it effectually overcome I commonly fix two years (it may be longer) as the least period to be considered at first, and then, if after that the patient relapses into exactly the same mode of life and condition of system as previously, there may be a threatening of the eruption But if, with its slightest recurrence, energetic measures are at once taken and continued, the trouble may be avoided, as I have observed time and again

Time forbids going at length into the details of constitutional treatment, so different are the cases, but a few words of suggestion may be given Mention has already been made of the excellent results sometimes obtained by antisyphilitic treatment, even when no specific history can be obtained, also of the disappearance of the eruption under the free use of nitric acid internally In full blooded plethoric cases, tartar emetic in increasing doses, to toleration, given six times daily, with nux vomica and quassia, has cleared up a number of my cases in a surprising manner, without local treatment, but this needs to be followed by a tonic course of iron and arsenic, and perhaps returned to again In cases in which debility was evident, a strong course of iron and arsenic, with bitter tonics, has had like effect, and the same has been accomplished with cod-liver oil, in suitable cases There are also many patients in whom arsenic alone, in efficient doses, suffices to keep the disease in abeyance

Arsenic is so well known that little need be said concerning it I have never had occasion to regret its use in suitable cases, and have had patients who consumed large quantities with only beneficial results The greatest consumer of arsenic was a clergyman, under my care more or less for twenty years, beginning at 30 years of age, when he had already had the eruption eight years He calculated that sometimes he took almost 8 ounces of pure Fowler's solution in the course of a single year, and over half a gallon, in drops, in the course of fourteen years But arsenic does not suit every case nor every stage of the disease As is well known, it sometimes stimulates the eruption to increased activity, and is seldom of value in its acute or developing stage, but rather aggravates it

Alkalies, properly used, and such remedies as promote a perfect urinary secretion, are of the utmost value in most cases of psoriasis and it is here that the value lies in most of the mineral waters used at the springs or at home But to be really effective they should be administered with a repeated and perfect knowledge of the kidney secretion, as shown by quantitative analysis The urine should not be kept alkaline, but somewhat below the normal acidity Acetate of potassium, combined with nux vomica, and the fluid extracts of dulcamara and rumex, is most valuable, especially in the most congestive forms of the eruption

Diet, undoubtedly, has much to do with psoriasis, and should always be most carefully attended to Alcohol in any form, even the lightest wine or beer, is prejudicial and must be absolutely avoided Whatever may be the mode of operation, there is no question in my mind, from

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* At the date of correcting proof, four months later I may add that the dose has been gradually increased until she is now taking about ten drops of the strong nitric acid three times daily with the entire absence of the eruption when seen to-day and with no local treatment for a long time

repeated observations, extending over many years, that meat, especially if freely indulged in, increases the liability to and severity of the eruption, as I reported ten years ago,[4] and I am more convinced in regard to this than at that time. For many years I have placed numerous psoriatic patients on a strictly vegetarian diet, with most excellent results, and these results are further corroborated by the fact that now and again, when one has broken through the regulations, he or she has reported with a recurrence of the eruption. I make the diet absolutely vegetarian, not even allowing eggs or fish, or milk as a beverage, with eating, and sometimes I have even excluded coffee and tea with advantage. Excess of sweets also tends to increase the eruption in psoriasis, and these should be greatly restricted; moreover, as the eruption is often increased by dyspepsia I see to it that pastry or articles exciting indigestion are also avoided.

Hygiene has a certain bearing on psoriasis, and in an effort to secure a cure of the disease it should always be controlled. This can not be gone into fully here, but if, as I believe, faulty metabolism is the bottom cause of the malady, every item which can conduce to its perfect performance should be attended to; and unless the physician investigates and directs this, the patient will be apt to live just as before. I have elsewhere reported psoriasis profoundly affected by the condition of the nervous system, the eruption appearing with each nervous breakdown, and we all know of the recurrence of psoriasis in connection with lactation. Temperature has much to do with the eruption, as it frequently disappears on removal to a warm climate, and the disease is relatively seldom seen in the tropics.

In regard to local treatment I have little to say, except that I agree with the most radical localists, in regard to the importance (although not relative importance) and effect of local therapeutic measures, no one who has seen much of the disease could rightly do otherwise. The rapid removal of a long standing and rebellious eruption of psoriasis by the proper use of chrysarobin, of good quality, is certainly a striking evidence of therapeutic power, but we all know the objections to chrysarobin, and often it is not feasible to employ it in private cases in an efficient manner. Sometimes, however, the eruption does not yield to it, and occasionally it fails owing to an inferior quality of the drug. I need not take time to enter into the details of other local treatment which are well given in literature, almost every variety of which I have, at one time or another, used in private or public practice. As in all other cutaneous maladies the application has to be fitted to the case, and varies according to the character and stage of the eruption, and time forbids further consideration of the subject. But I would like to say a few words in regard to the treatment of the eruption by the *x*-rays, in which I have had some interesting experiences. They are by no means suitable to every case, although as yet I have had no unfavorable experiences, except one, among a considerable number of cases thus treated, in part. In this patient, a man aged 55, there was a slight burn on the abdomen, with the same strength of application used elsewhere; but this healed soon, and the results elsewhere had been so favorable that he insisted on having the *x*-ray still employed on other patches, even while this was sore. I have used it only on older, more chronic lesions, and have repeatedly seen a single application of medium intensity remove a patch entirely. It often leaves a brownish stain, which persists some little time. I have had cases in which, although new eruptions developed elsewhere, the portions which had been treated by the *x*-rays remained free. As an adjunct to the local treatment of psoriasis, in proper cases, I consider this new measure a most valuable addition to our armamentarium.

CONCLUSIONS

In conclusion I would emphasize the following points in regard to the disease under consideration:

1. Psoriasis is not a purely local disease of the skin, but has constitutional relations which are most important.

2. Psoriasis is not a parasitic disease of the skin, in the usual acceptation of the term; it is not contagious, nor has it a definite micro-organism. But probably the immediate lesions on the skin are caused by the growth of some of the ordinary micro-organisms usually found on the skin, which take on a pathogenetic action when the soil is suitable.

3. Psoriasis can not be cured permanently by local treatment alone, although when properly directed this is commonly capable of removing existing lesions, which are likely to return.

4. In some instances in which local treatment seems to be followed by success, the eruption may be seborrheic dermatitis, which in some of its phases closely resembles psoriasis.

5. Hereditary influence is a relatively unimportant factor, not operative in more than one-quarter of all cases; even in many of these instances but one child may be affected among many healthy children.

6. Psoriasis is not a late manifestation of syphilis.

7. There is no one tangible internal cause of psoriasis, though faulty metabolic changes are probably at the bottom of every case, and these may be induced in many ways.

8. The repeated and thorough volumetric analysis of the urine is a most valuable aid in determining the line of proper treatment in different cases, and at different times.

9. There is no one internal remedy universally of value in psoriasis, although arsenic is the single agent of most service in the greater number of instances. Arsenic is safe, if properly used, and may be taken for a long time with only beneficial results; but it commonly requires to be employed in conjunction with other internal measures, or alternated with them. In acutely developing psoriasis it often acts badly, increasing the eruption.

10. In a large share of cases alkalies, if properly used, are of the greatest value in psoriasis.

11. The avoidance of meat, or an absolutely vegetarian diet, is a most valuable aid in treatment, and sometimes will be attended with freedom from the eruption.

12. Psoriasis is an exceedingly chronic and rebellious disease, and effective internal measures must be continued for a long time, generally for at least two years, to ensure a cure.

13. Local treatment is of the greatest value in the removal of the eruption present, but its temporary success should not interfere with the persistence in proper internal measures for a length of time, even when no eruption exists. The eruption can also disappear under the strictest proper internal treatment, without the aid of any local measures.

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[4] Trans. Third Internat. Dermatol. Cong., London, 1896, p. 734.

14. The x-ray is a most valuable adjunct to local therapeusis, and is sometimes capable of removing chronic lesions even by means of a single application

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DISCUSSION

Dr Frederick A Rhodes, Pittsburg, Pa, said that a few years ago he sent a letter to a number of dermatologists in this country asking what, in their experience, is the ratio of psoriasis to other skin diseases, also, to what diseases, in their opinion, it is especially allied, and their views, in a few words, as to prognosis, etiology and treatment To most of these letters he received courteous replies, but after summing up the conclusions he was no better off than before He is particularly interested in psoriasis because for 6 years he has been a sufferer from the disease. In 1899 he first noticed a small, papular lesion on the inner surface of the left ankle, above the malleolus, which he did not consider seriously It remained as a single lesion for a number of months About that time, on account of an epidemic of smallpox in the neighborhood, he re-vaccinated himself a number of times, but with no result In the course of a few weeks, however, a number of new psoriatic lesions developed, and within three months there were numerous patches from the knees to the feet, and a few isolated lesions on the thighs and arms Dr Rhodes said that some of the leading dermatologists hold the view that vaccination will arouse a latent psoriasis, and a few years ago, in the *British Journal of Dermatology*, a series of cases was reported in which the claim was made that vaccination is the cause of the disease Dr Rhodes said that he does not agree with the view that it can be the real cause, but believes it can arouse a latent one.

During the first year after his psoriasis developed it was worse than it has been at any time since, and the scaling was very free He tried various methods of treatment without avail, and stated that if one were to try all the remedies that have been recommended in this disease, it would practically include the entire pharmacopeia He tried the different local remedies and arsenic internally, with no other effect than to alleviate the symptoms to some slight extent Finally he came to the conclusion that the eruption is the result of metabolic disturbance, and in spite of the fact that during the past three or four years he has done practically nothing in the way of treatment, a gradual improvement has been noticed The eruption is worse during the winter months, in February and March the lesions usually increase in size and number, and with the onset of the warm weather an improvement is noticed While the x rays have given good results in some cases, he is of the opinion that exposure to sunlight has been equally efficacious in his cases The fact that there are so few cases in tropical countries, with benefit of warm sunlight when tried, tends to show that the eruption is caused by some disturbance of the vasomotor system, probably of the vasodilators, the action being reflex and irritant due to metabolic products circulating in the blood Dr Rhodes said that a peculiar feature in connection with his own case is that at the time the disease manifested itself he had an attack of gastralgia which persisted as long as the eruption was severe, and there have been recurrent attacks of the gastralgia coincident with the outbreaks of psoriasis In conclusion he stated that the attacks, both in time of appearance and physiologic action, resemble very much those of chorea, another disease of doubtful etiology In chorea the irritating effect is manifested through the motor nerves, while in psoriasis the manifestation is seen in those nerves when modified by sympathetic ganglia

Dr Charles P Sylvester, Dorchester, Mass, reported a case of psoriasis which resisted all external and internal medication, but was rapidly cured by laparotomy and curettage The patient was a married woman, aged 27, a blonde, who had always been strong and healthy, except for a constant leucorrhea following the birth of a child 6 months before Her bowels were regular, menstruation was normal, but rather free. She was fond of candy In March, 1903, she had a severe attack of tonsillitis which so closely resembled diphtheria that 5,000 units of antitoxin were given while awaiting culture reports, all of which were negative Five weeks later, punctiform macules appeared on the face and body, which were scaly and itching in character, with lameness of the muscles and painful joints The patches slowly increased in size and number until almost the entire body, including the scalp and face, but excepting the palms and soles, was covered with the lustrous, scaly patches, some of which, around the umbilicus and sacrum, coalesced to form areas as large as the palm, while most of them did not enlarge to the size of a dime Various internal and external remedies were used without much effect, including mercury and potassium iodid, as the sore throat, followed by the eruption, suggested syphilis The subsequent history, however, eliminated that disease Vaginal examination revealed a large, retroverted uterus, with a polypus projecting from the external os, and a small fibroid on the posterior wall of the fundus The cervix was slightly torn on the left side There was an offensive, viscid discharge An operation was advised for the removal of the tumors, for restoring the normal position of the uterus and relieving the leucorrhea, and as the best chance of curing the psoriasis The patient refused surgical treatment The disease assumed more and more of a chronic nature, until finally 6 months after its appearance, it began to fade gradually, and in January, 1904, it had entirely disappeared. The following September it again appeared, and progressed steadily until December, when the patches were thicker and more hyperemic than at any time during the previous attack, and her face was so involved that she would not venture outdoors An operation was again strongly advised, and this time the patient consented. She was taken to the Moultrie Street Hospital, Dorchester, and on January 4, 1905, after curetting the uterus and removing the polypus, Dr Sylvester performed a laparotomy, removing a small fibroid and attaching the uterus to the anterior abdominal wall. Four days later the eruption seemed much improved, and in two weeks it was no longer visible on the face She made an uneventful recovery from the operation, and on the fifteenth day left the hospital On March 1, less than two months after the operation, there were no visible signs of the eruption, except a slight erythematous appearance about the umbilicus and sacrum, where the most indurated patches had occurred. Up to the present time there has been no recurrence of the psoriasis or the leucorrhea, and she is in excellent health

Dr Sylvester said that psoriasis, in his opinion, is not of parasitic origin, nor is it an inherited sequel of syphilis, tuberculosis, rheumatism or gout It is a manifestation of a toxicosis, and the case he reported together with others he has seen following vaccination and scarlet fever is in accord with that theory Either the streptococcic infection of the throat, the administration of the antitoxin, or the infected endometrium, one or all, on the one hand, or the reflex irritation of the retroverted uterus and the presence of the tumors, on the other, furnished the cause Relieving the leucorrhea, which was kept up by the polypus and the displaced uterus, in all probability effected the cure A laparotomy diet for one or more weeks may not be without beneficial effects if psoriasis is due to an autointoxication

Dr. William S Gottheil, New York City, said that the position taken by Dr Bulkley marks a reaction against the purely local treatment of psoriasis which the Vienna school has long advocated. There are certain cases, no doubt, in which metabolic conditions are connected with the appearance and persistence of the eruption, but there are also a large number of cases in which nothing abnormal can be detected in the constitutional states of the patients He recalled one case under his observation, the wife of a physician, who suffered from a recurrent attack of psoriasis every time one of her children was ill, or when she was worried from any other cause When such an attack came on she was isolated in a room on the upper floor of her home, she was not allowed to be harassed by any household cares, and with practically no other treatment the eruption rapidly disappeared Dr Gottheil said that arsenic is beneficial in many cases of psoriasis, especially when given hypodermically and in large and in creasing doses His favorite preparation is a 1 per cent solution of sodium arseniate, repeated every day or every other day, until 40 drops are given in the course of 24 hours in appropriate cases Externally, the preparations of tar are as useful as chrysarobin, and are much more commonly employed in Germany than in this country Dr Gottheil said that he has no doubt the *x* ray is beneficial in some cases, but he has yet to see the psoriatic patch that will not respond to proper energetic local treatment He agreed with Dr Bulkley that it would be a good thing if patients with psoriasis would consent to remain under treatment for 2 years or more The majority of them, however, grow impatient unless they obtain prompt relief The practical conclusion is that these patients are relieved but not cured, and that a recurrence can usually be confidently looked for

Dr Francis J Shepherd, Montreal, said that he is inclined to agree with those who attribute psoriasis to some fault in the metabolic processes, at least in many of the cases, if not all, even though it can not be detected. He referred to a case he saw a number of years ago, which was interesting in connection with a meat diet and its bearing on this form of eruption The patient was an officer in the Hudson Bay Company who lived far north, and for about 10 months in the year subsisted on a meat diet almost exclusively He had a very extensive psoriatic eruption, which disappeared permanently after he removed to Montreal, and gave up his meat diet Dr Shepherd also mentioned another case, that of a man who at times drank wine to excess, even indulging in prolonged sprees At such times he had severe outbreaks of psoriasis, the eruption disappearing when he stopped drinking, and recurring with the onset of the next spree Dr Shepherd said that he is convinced that vaccination at times determines the outbreak of psoriasis in predisposed individuals, although if vaccination had not been the exciting cause, no doubt something else would.

Dr James C White, Boston, declared that he always tells his patients that psoriasis is in one sense an incurable disease Some persons may have only one attack, others may have repeated attacks, and he does not believe that any medicine, either internal or external, will radically change the course of the disease to any material degree so far as its recurrence is concerned In dealing with an affection which is capable of spontaneous disappearance, it is perhaps erroneous to draw deductions from its non recurrence following any course of medication Moreover, the course of the disease is so irregular and uncertain that it is difficult to draw conclusions as to whether or not it would recur after this or that method of treatment With increased experience, he said he becomes less and less confident as to the value of internal remedies in this disease He gives arsenic less than in former years, and in the chronic form of the disease he is inclined to rely more on potassium iodid In acute cases he gives no internal remedies, except perhaps some alkaline preparation. Dr White said that many years ago a statement was made by a physician of authority, who cited a large number of cases to prove his assertion, to the effect that the disease is curable by the use of an exclusively vegetable diet A year or so afterward another, equally distinguished, put all his psoriatic patients on an animal diet, and his results were just as good The important factor in the treatment of psoriasis, Dr White said, is to put all the patients into as good a condition as possible. Psoriasis has been called the skin disease of health, because it is observed so frequently in patients who are otherwise perfectly healthy He said that in some cases, but not in all by any means, the results of the use of *x* rays are marvelous, even in cases that have resisted every other method of treatment In those very same cases the eruption may recur and the *x* ray treatment prove without effect Thus it is that the *x* ray has only added one more uncertain remedy in the treatment of this disease

Dr. W D Calvin, Fort Wayne, Ind, called attention to the fact that he has seen a psoriatic eruption disappear while the patient was suffering from pneumonia only to reappear later He has observed the same phenomenon during the course of an attack of inflammatory rheumatism, and has recently heard of an instance in which it disappeared during typhoid fever These experiences seem to indicate that psoriasis is not the result of various kinds of intoxications, but of a special poison He has seen cases in which the eruption yielded to almost anything, in others it persisted in spite of various methods of treatment He has never resorted to the *x* ray treatment in psoriasis, but has always endeavored to put the patient in as good a physical condition as possible, correcting errors of diet, methods of living, etc, but none of those measures has proved very satisfactory

Dr Gardner T Swarts, Providence, R I, said that acting on the theory that psoriasis is due to metabolic disturbance resulting from a deficiency of some of the glandular secretions, he has administered thyroid extract in a number of cases with apparently satisfactory results, only to have the eruption recur and disappear again under the use of potassium iodid, hydriodic acid, or alkaline treatment Whether the various remedies that have been recommended ever cause the eruption to disappear, or whether the improvement is due to Nature, or to the peculiarity of the disease he said he would leave to the members of the Section to decide

Dr John B Kessler, Iowa City, Iowa, said he is rather inclined to favor the use of salicin in preference to arsenic in the treatment of psoriasis His experience with the *x* rays in the disease has not been satisfactory He asked Dr Stelwagon what his experience has been with carbolic acid in the treatment of this condition.

Dr. Henry W Stelwagon, Philadelphia, said that he believes that heredity, either directly or indirectly, exerts some influence on the development of this disease In any predisposed person, any ill condition of health accompanied by fever may also be a contributing factor There are many other contributing factors, but they should not be mistaken for the cause of the disease In the treatment of psoriasis, the first essential is to put the patient in as perfect a condition of health as possible The fact that the psoriatic eruption may disappear temporarily during the course of the acute exanthemata or any febrile condition is true not only of psoriasis but also of many of the inflammatory dermatoses, including eczema, dermatitis herpetiformis, etc Dr Stelwagon declared that he was surprised to hear that reference had been made, even negatively, to the possible relationship between syphilis and psoriasis He had supposed that that question was settled long ago, and that the view that there is any association between the two diseases is obsolete It is well known that psoriasis is a chronic, general disease, bearing no relation to syphilis In regard to the various remedies and successful methods of treatment that have been loudly proclaimed at different times in psoriasis, Dr Stelwagon said that in his opinion, the result of treatment depends largely on the time of year when the case comes under observation. Take, for example, a patient who, during the winter, has been under the care of various physicians without being benefited About May or June, at the approach of warm weather, when the disease shows a natural tendency to improve, he perhaps makes another change in his physician, and under almost any remedy the eruption often disappears, due largely to the seasonal influence Dr Stelwagon is in the habit of telling young men who suffer from psoriasis that they should reside in a warm climate, because the disease as known in the north, is often extremely persistent and rebellious but that it can be temporarily cured, though a recurrence is very apt to take place In many psoriatic patients who have never taken arsenic, the drug seems to act almost like a specific. Thyroid extract is beneficial but it has so many unfavorable effects that it is withheld until absolutely necessary Carbolic acid, which was recommended long ago, in small doses, by Kaposi, has given good results in Dr Stelwagon's practice during the past year, when administered in large dosage He usually administers the drug in a 25 per cent solution of glycerin and water, and gradually increases the dose until the patient is taking from 18 to 30 grains daily The patient's urine should be watched for possible toxic action, but if the pure acid is used there are rarely any bad effects Like other [illegible] it gives [illegible] sician [illegible] port[illegible] of doing away
enic[illegible]

under observation[3] began to drag his right foot, it tended to cross in front of the left, and he wore off the sole of his right shoe at the toe Two years later he had diplopia, which lasted for five months The right leg at this time was somewhat smaller than the left About three and a half years after the right foot first began to drag, which was about five months before coming under observation, weakness was noticed in the right arm

Examination showed that when the patient walked the right leg was rigid and the toe dragged. The movements of the right leg could be performed, but were distinctly weaker than those of the left The right leg and arm were both somewhat atrophied The adductor pollicis muscle of the right hand was not so large or firm as that of the left. The muscles everywhere responded to the faradic current, the tendon reflexes on the right were all exaggerated, and a well marked Babinski reflex was present on this side The reflexes on the left, while marked, were much less active than those on the right Plantar stimulation caused slight extension of the great toe and flexion of the others Right sided facial paresis was present The muscles of the right side of the throat were also paretic, and the voice had a distinct nasal twang Nystagmus and paresis of the left inferior rectus, and pallor of the temporal halves of the discs were other symptoms All forms of sensibility were everywhere preserved The patient showed a slight Romberg symptom, and at times while standing or walking, a tendency to lose his balance The case was regarded as one of disseminated sclerosis, beginning as unilateral ascending paralysis

CASE 5—A man, aged 60 at the time of his death, about eight years before had some paralysis of the right extremities[4] At this time knee jerk and biceps jerk were increased on the affected side Four years before his death hospital notes showed some loss of power in both the right leg and right arm, and all the muscle and tendon phenomena on the right side were exaggerated, patellar clonus and ankle clonus both being present, also the speech was slightly affected, and sensory impairment and astereognosis were absent.

Notes made between two and three weeks before death showed that he was markedly paralyzed in the right leg, and to a less extent in the right arm, also that he was paralyzed in the left leg, but not as seriously as the right The paralyzed limbs were spastic, and the tendon and muscle phenomena were all exaggerated. He had ankle clonus on both sides, and patellar clonus and the Babinski response on the right. Sensory phenomena were absent The face was not paralyzed. Contractures and wasting were absent During two or three years before his death he was treated for cardiovascular symptoms, including attacks of angina

Postmortem showed advanced disease of the heart, vessels and kidneys, the case being an extreme instance of arteriosclerosis Chronic pleurisy and tuberculosis with cavity formations were present Microscopic examination showed intense and long standing degeneration of the right crossed and left direct pyramidal tracts, the degeneration extending into the pons, but not into the left cerebral peduncle, also comparatively recent degeneration of the left crossed and the right direct pyramidal tracts, traced by the method of Marchi into the lower part of the right internal capsule. No lesions, degenerative or focal, were found elsewhere in the brain or spinal cord.

CASE 6—A young woman, aged 18 at the time of first coming under observation,[5] was noticed to show slight clumsiness and awkwardness in using the right hand and foot shortly before the age of fourteen. Gradually the weakness of the right lower and upper extremities increased, this from description being more marked proportionately in the former than in the latter When between seventeen and a half and eighteen years old a slight swelling of the right half of the thyroid was noticed.

Examination showed no abnormality of cutaneous and muscular sensibility nor of the special senses Pupillary reactions, movements of the ocular muscles and the fundus oculi were all normal The sphincters were also normal and the patient was mentally sound The reporter gives in careful detail a description of the musculature and of the movements performed or incapable of proper performance on the right half of the body Summarized, this indicated marked loss of power and atrophy in both the right upper and lower extremities, considerably greater in their distal than in their proximal portions The affected limbs were neither spastic nor ataxic, but gave rather the appearance of flaccidity or flabbiness The paralysis and atrophy were not localized to special groups of muscles Marked quantitative change to the faradic current was present, being especially noticeable in the muscles which showed the greatest wasting, these being the hand muscles, the anterior tibial and the peroneal All the deep reflexes were greatly exaggerated on the right side The Babinski extensor response was typically present, but there was only an indication of ankle clonus Some paresis of the muscles supplied by the seventh nerve and marked loss of power in the motor distribution of the fifth nerve were present

CASE 7—A woman, aged 50, was seen in consultation in October, 1905[6] In August, 1904, she first discovered some weakness of the right lower extremity, although it may have been present in mild degree before The weakness and awkwardness in using the limb very gradually increased until about one or two months before coming under observation, since which time the impairment had increased more rapidly The patient had suffered no pain in the extremity, in the back or in the head, and had no symptoms of cerebral disease She had occasional headaches which seemed to be of the migraine type, and now and then had a slight vertigo, but this was probably due either to the condition of her stomach or to some arteriosclerosis

Examination of the right lower extremity showed general paresis of moderate degree in the entire limb, that is, all movements were impaired in force without definite localized palsy of any group of muscles The movements of flexion, extension, abduction and adduction of the foot and also intermediate movements were distinctly impaired as compared with those of the left foot, but the reduction in power extended to the entire limb, although it appeared to be more marked distally The right knee-jerk was greatly exaggerated and patellar clonus could be elicited. Persistent ankle clonus and also a decided Babinski response were present on the right Front tap was present and marked on the same side and the muscle jerks were also plus on this side On the left the knee-jerk was somewhat above the usual norm, as were also the muscle jerks, but patellar clonus and front tap were absent. The plantar response on this side was irregular Careful examination was made for sensory disorders, with absolutely negative results Examinations seemed to show some slight impairment of the upper extremity, but so slight that it was hardly fair to record it as present

CASE 8—A young man, aged 23, complained that for six months his left leg had been growing gradually weaker He would sometimes trip because he could not clear the ground well with the tip of his left foot At times also he could not use the left arm well His condition for about one year is described by the reporter[7]

His walk suggested a foot drop on the left side, but did not show the circumduction frequently exhibited by hemiplegics Dorsal flexion of the foot was very feeble, movements of the toes being almost completely lost Movements at the left knee and hip could all be performed, but with less force than on the right Knee-jerks and heel jerks were lively on both sides, but much more marked on the left than on the right, and after three or four months ankle clonus could be elicited The Babinski response was absent on both sides The entire left lower extremity was not spastic but flaccid and the seat of general wasting The left upper extremity was smaller than the right. Atrophy was also distinctly shown in the neck and shoulder As time progressed the left upper extremity became completely paralyzed The left face showed no paralysis or atrophy

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[3] Potts Charles S Jour Nerv and Ment. Dis. xxxviii, No 10 October 1901

[4] Mills Charles K., and Spiller, William G Jour Nerv and Ment. Dis July 1903

[5] Patrick Hugh T Jour Nerv and Ment. Dis, xxx, August 1903

[6] Mills Charles K. Jour Nerv and Ment. Dis, xxxiii No 2 February 1906

[7] Newmark L. Jour Nerv and Ment. Dis xxxiii No 3 March 1906

Examinations made several years after the first observation of the patient gave, by the Oppenheim method, a flexor response in the smaller toes of the right foot, and a distinct extensor response in the big toe of the left foot The response to both the faradic and galvanic currents was normal All forms of sensibility, the special senses, and the bladder and bowels were normal Absence of exaggeration of the deep reflexes in both upper extremities was an incongruous feature of the case

These cases represent the literature of this subject as known to me up to the time of the preparation of this paper They all seem to present in their symptomatology evidences of the probable degeneration of the pyramidal tracts, crossed and direct I shall recur again to Case 1, when discussing the subject of the unilateral ascending type of paralysis agitans, which this case was believed to be by Patrick Whatever the case was in its totality, it certainly presented some of the features of a case of pyramidal degeneration Case 2, seen by me more than 20 years ago, and, therefore, in reality, the first case observed, was without doubt one of progressively ascending hemiplegia due to pyramidal degeneration Cases 3, 5, 6, 7 and 8 seem to belong to the type first indicated by me, although differing in some features, especially as regards spasticity, the reflexes and wasting The solution of these differences can only be had as we gain more knowledge by the study of cases, and especially as we acquire additional pathologic data Case 5, that of a patient originally observed in my wards at the Philadelphia General Hospital, and published by me in conjunction with Dr Spiller, is the only one as yet in which necropsy and microscopic examination have shown degeneration limited or almost limited to the crossed and direct pyramidal tracts Case 4, recorded by Potts, was, in all probability, as he suggests one taking the form of unilateral ascending paralysis in a comparatively early stage of disseminated sclerosis This case will be presently referred to again when considering the unilateral ascending type of disseminated sclerosis

I shall next present the details of an unrecorded case of unilateral ascending paralysis—one which does not seem to belong clearly with any one of the 8 cases just summarized It is apparently an illustration of cerebrospinal syphilis, taking the unilateral ascending form

Case 9 —The patient, a man, aged 55, had no family history of importance He had worked in lead 10 years before coming under observation Four years before this time his right leg began to grow weak, the impairment of power steadily increasing The veins of the right leg were markedly varicose A dull aching pain developed in the heel and in the calf in the region of the varicose veins The aching had grown worse with the weakness Three years after the onset he first began to notice weakness and aching in the right arm, these increasing steadily Shortly after this weakness became noticeable in the left knee and ankle, with some ache in the heel The left arm remained normal The bladder and bowels were not involved He occasionally suffered from backache

Examination showed that in walking the patient dragged his right leg Power in the right leg was greatly diminished but normal in the left. The right arm was weaker than the left. The right lower face was paretic. He could not draw the right angle of the mouth up on smiling the left angle of the mouth was drawn upward more than the right. He could wink each eye separately, the left better than the right. Patient stated that his left arm and leg were beginning to feel as the right extremities felt a year or more before Muscular atrophy was absent Standing with his eyes shut he almost fell Both knee-jerks were exaggerated, the right more than the left The ankle jerk was exaggerated on the right but diminished on the left. The Babinski response was obtained on the right but not on the left Biceps and triceps reflexes were increased on the right and normal on the left Sensation for touch and pain was normal in the extremities and in the face. Speech was normal

Eye examination revealed extensive chorioretinitis with well advanced optic nerve atrophy The pupils responded sluggishly to light and more promptly to convergence No diplopia or muscle insufficiency was present. The fields were much contracted, especially on the temporal side Patient passed from under observation before an entirely satisfactory investigation of his case was made

UNILATERAL DESCENDING PARALYSIS

I had the opportunity of seeing and studying the following interesting case through the courtesy of Dr William C Pickett, of Philadelphia, whom I had requested, with others, to be on the lookout for cases of unilateral ascending and unilateral descending paralysis Dr Pickett, on first seeing the case, at once recognized that it belonged to the type of progressively developing hemiplegia, in this case taking a descending course

Case 10 —A woman, about 45, had been well until three years before coming under observation, when for the first time she noticed a weakness in the left arm on attempting to use it She soon lost the power of lifting and projecting the arm The impairment of power became more marked in the distal than in the proximal portion of the limb, and a few months after the onset of the paresis the movements of the hand at the wrist and those of the fingers became much impaired.

About one year from the time when the arm was first affected she noticed some weakness in the left leg In describing the condition of her lower extremity at this time she said that she felt as if she made miscalculations in stepping up or down In walking, the toes and fore part of the foot would catch or not be lifted properly, causing her to stumble. She soon had a limping or dragging gait. In the course of five or six months a marked degree of paralysis developed in the left lower extremity The left upper and lower extremities had been in a condition of gradually increasing helplessness during the last 18 months The patient said that she felt as if she had to carry them with the other part of the body She had also a curious feeling of loss of power in the abdomen or bowels of the left side. Her face and ocular muscles had not been affected

Neither before nor since the coming on of the paralysis the patient had not had any severe headache, paroxysmal or continuous, or any spells of nausea, vertigo or vomiting She had also had, so far as she knew, no disorder of sight, hearing, smell or taste She had had no loss of control or other affection of the bladder She had had no double vision or no difficulty in dragging in the affected limbs Her menses had continued regular, and her bowels had also been regular with the exception of occasional constipation

Careful examination gave the following results Left arm was limp or flaccid, the only place where any contractures were shown was in the fingers, which were half flexed at the first and second phalangeal joints, but this condition of contracture was a passive rather than an active one The bend of the fingers was evidently due rather to loss of power in the extensors than to any active spastic condition of the flexors The fingers and thumb dropped into the hand The loss of power in the limb was greater distally than proximally She could elevate the entire extremity to an angle of only about 45 to 50 degrees with the shoulder She could, however, bend the forearm about half way, and extend the arm against resistance, but with about half the normal power, in other words, the movements of the upper arm were considerably impaired but all retained She could not pronate or supinate the forearm she could not flex the hand on the wrists, she could not ulnar flex it or fully extend it but had some power of extension, especially showing itself toward the radial side of the hand She could not extend the fingers at the metacarpophalangeal articulations or distally [illegible] had [illegible] slight flexor power in the movements of the [illegible] Th[illegible] [illegible]duct and abduct the thumb which lay [illegible] In spection showed some apparent [illegible] scapular muscles and perhaps of lateral and descending, has been recorded by Potts.[10] Both sides of the body were eventually involved, bulbar symptoms appearing and becoming prominent.

DESCENDING TYPE OF UNILATERAL AMYOTROPHIC LATERAL SCLEROSIS

Seven of the ten cases collected by Spiller were of descending type (Dejerine, Pick, Leyden, Lennmalm, 3 cases of Probst). Of these, five began with bulbar symptoms, the paralysis of the upper and lower extremities coming on in succession, or at least later. In a case reported by Dejerine, beginning with bulbar symptoms, the lower extremity of the side affected was more markedly paralyzed than the upper. In Pick's case paralysis began first in the left upper limb and extended to the lower of the same side, later the right side became affected. In Leyden's case bulbar symptoms were first, next weakness developed in the left upper limb and later in the left lower extremity. In Lennmalm's case bulbar symptoms were followed by loss of power in the extremities of the right side and later by paralysis in the left upper limb.

In one of the several cases reported by Probst bulbar symptoms began first, the right upper and lower extremities becoming involved. In another case reported by Probst, weakness began in the left upper and lower limbs and later in the right upper. In still another case of Probst's bulbar symptoms began first, followed by weakness in the left upper extremity and in a short time in the left lower extremity.

Recently, I had the opportunity of studying a case of unilateral amyotrophic lateral sclerosis of descending type which it may be worth while to record in this connection, owing to the fact which has just been shown that scarcely more than a dozen unilateral cases of this disease have as yet been put on record.

Case 13.—A boy, aged about 14, was in good health until about three years before he was seen by me for his family physician, when he began to have slight tremor in the right hand. About eighteen months to two years later some weakness in the right leg was observed.

Examination showed no particular difference in the two sides of the head and face. Ocular movements were normal, as were also movements of the parts supplied by both the facial and trigeminal nerves. The right upper extremity showed distinct and nearly generalized atrophy, and some wasting was present in the right half of the trunk. The right thenar and hypothenar eminences were extremely wasted. The right lower extremity, like the upper, was also generally smaller than the left. Testing for special movements, weakness was found in all parts of the limb, but this was much more decided in the proximal than in the distal portions. The movements of the foot on the leg and the movements of the toes were greatly impaired. Every possible movement of the foot and toes was tested, with the result just given. Farado contractures were well preserved on both sides, on the right side was a quantitative increase, the muscles generally responding to a current of less current strength on the right than on the left side. A moderate current produced widespread contractures in the general musculature of the arm, probably partial degeneration reaction.

On attempting movements of the right or atrophied arm the patient had associated movements of the left. No matter what movement was attempted with the right upper extremity, the left upper extremity responded, sometimes in regular and sometimes in a sort of forced athetoid movement of the hand and fingers. Voluntary movements of the right lower extremity did not cause movement in the left lower, but did cause some movement in the left upper extremity. These, however, were by no means as marked as when the voluntary effort was made with the upper right extremity. Both the deep and superficial reflexes were everywhere greatly exaggerated on the right side, the muscle and tendon jerks of both arm and leg being carefully examined. The right great toe remained permanently somewhat extended as in a case of Friedreich's ataxia. A marked Babinski reflex was present on this side, the already extended great toe extending still further on plantar stimulation. Ankle clonus was present on the right side. The wasting and loss of power were not present anywhere in the left half of the body. The reflexes, while prompt, were not exaggerated as on the other side, and irritation of the sole of the foot gave *normal plantar* flexion. A very slight hypesthesia was present in the right arm and trunk. The patient's mental condition was good. He had kept up with his class in a good preparatory school. He had neither continuous nor paroxysmal headache nor any other evidences of focal disease. The case seemed to be clearly one of unilateral amyotrophic lateral sclerosis beginning first in the upper extremity.

UNILATERAL ASCENDING TYPE OF PARALYSIS AGITANS

It is, of course, well known that paralysis agitans is often for a long time a unilateral affection, it is not so well understood that the unilateral form of this disease not infrequently is of ascending type, the disease passing from lower to upper extremity of the same side and later to the opposite lower and upper extremity. Patrick regarded one of the cases described by me in 1900 as an illustration of this affection rather than a case of primary degeneration of the pyramidal tracts, but of this I have not been convinced. With regard to this matter I need only reproduce here remarks made in a previous paper written in collaboration with Dr. William G. Spiller:[4]

> Among the reasons for believing that the case was not paralysis agitans were the absence of spontaneous tremor, the presence of markedly exaggerated reflexes on the affected side, even including ankle clonus and patellar clonus, the existence of decided wasting on one side, especially of the lower extremity, and the absence of the facies of paralysis agitans and of a fixed position of the body and head. According to Sir William Gowers[11] both primary lateral sclerosis and paralysis agitans are probably abiotrophies, and it may be that in the case under consideration the two abiotic diseases are conjoined.

Patrick[5] reports a case of unilateral paralysis agitans in his paper with the view of indicating the similarity of this case to that reported by me and reinvestigated by him. In this case the disease began in the upper extremity, passing later to the lower. My impression is that this is rather the usual course, although I have not made any collection of cases to demonstrate the point. Whether or not the case reported both by Patrick and myself was one of paralysis agitans or of paralysis agitans and pyramidal degeneration conjoint, it is certain that Parkinson's disease may remain for a considerable time unilateral, and beginning in the lower extremity may take an ascending course. Recently, I have seen two cases of this ascending type.

Case 14.—A man, aged 55, a pattern maker, first began to notice stiffness or impairment in movement in his left leg in December, 1904. At first and for some time there was no involvement of the left upper extremity, but this gradually came on, and at the time when he was first seen, about 16 months after the beginning of the trouble in the leg, the arm was very markedly affected. He had occasional cramps in the legs, the toes at times contracting when these cramp-like feelings were present. He also had at times especially after sitting, feelings of numbness or tingling in the left leg and arm.

Examination showed a rather fixed position of the head, slowness of gait with some dragging of the left foot, and a marked tremor in the left upper extremity, especially in the hand, this being the type usually seen in Parkinson's disease. Observed over short periods it was sometimes present and at others absent, and it was a little increased by voluntary effort or attention While both the leg and arm on the affected side showed a little stiffness and awkwardness in movement, real loss of power was slight The patient still continued to work at his business, even using the left hand He said that if he could get a good grip on an object with this hand he could go on using it in his work. Sensation was everywhere retained

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[10] Potts, Charles S.: Univ. Penna. Med. Bull., July and August, 1905.

[11] Gowers, Sir William: Lancet, April 12, 1902.

CASE 15—A woman, aged 43, first observed weakness in the left lower extremity four years before coming under observation. Tremor did not appear for three years in the left lower extremity and shortly after this the upper extremity became involved, showing both weakness and tremor Symptoms appeared in the lower extremity of the opposite side three and a half years after the beginning of the disease The case was clearly one of paralysis agitans and need not be described at length

It is not my intention to go with any elaboration into a discussion of the differential diagnosis of unilateral ascending and unilateral descending paralysis from focal lesions, cerebral or spinal, from cerebrospinal syphilis, and from peripheral or hysterical affections For the sake of completeness, however, a few words may be said about these diagnoses In a rare case a brain tumor may originate in the cortical leg area or beneath it and develop toward the arm and face regions so as to cause a progressive hemiplegia of the ascending type The reverse might of course, take place, and the tumor originating in or near the face or arm area and progressing toward the leg center, give a unilateral descending paralysis In such a case some or all of the general symptoms of brain tumor would be likely to be present, and other focal signs of this affection, especially Jacksonian epilepsy, would sooner or later appear A tumor of the internal capsule would most probably produce loss of power in both arm and leg nearly simultaneously In some cases of arteriosclerosis necrotic areas form first in one and then in another portion of the brain, and it might happen that these would be so placed in succession in the motor region as to give unilateral ascending or unilateral descending paralysis Such a case would develop clinically by steps rather than by regular progression, and other signs or symptoms indicating the character of the lesions could probably be detected if sought for diligently A single tumor or necrotic lesion of the spinal cord would not cause a paralysis ascending from the leg to the arm, as the cerebrospinal tracts passing to the nerve nuclei for the upper extremity do not proceed lower than the upper thoracic region Peculiarly situated and peculiarly progressing focal lesions of the cervical cord might simulate a unilateral descending paralysis, but the other well-known symptoms of such a unilateral focal lesion would be present and the subject hardly needs discussion

The forms of spinal and cerebrospinal syphilis are protean A spinal or intracranial gumma or gummatous meningitis or a succession of focal syphilitic lesions might give rise to a one-sided paralysis appearing first in the leg and afterward in the arm and later taking the form of a triplegia This is, indeed, what occurs in some cases of meningitis or meningomyelitis with a secondary degeneration of the pyramidal tracts The new case of unilateral ascending paralysis (Case 9), had some of the features of a cerebrospinal syphilitic affection although the patient denied venereal disease Close attention to the history, and the presence of other evidences of syphilis and the variable and irregular manner in which the paralytic symptoms appear will assist in differentiating

A paralysis of peripheral origin of ascending or descending type, is rare, but, of course, may occur Such a case would probably depend either on the degenerative neuritis or on the succession of peripheral lesions The manner in which each stage of the paralysis appeared, the state of the reflexes, the results of electrical examination, and other well-known methods of determining the existence of a peripheral nerve disorder would serve to separate such a neural case from the forms of progressive hemiplegia under consideration The absence of hysterical stigmata, as well as the slowly progressive manner of appearance of the paralysis of leg, arm and face would make a hysterical hemiplegia improbable A pure neurasthenia never shows itself as a slowly developed and permanent hemiplegia

DISCUSSION

DR HERMAN H HOPPE, Cincinnati, said he was very glad to hear Dr Mills increase the latitude of the subject. He reported a case perhaps of this kind that he had had under his care for about a year or 18 months A young child about 3 or 4 years of age developed spastic paralysis, which first appeared in the arm, and then descended to the leg and ascended to the face The child was absolutely healthy up to the age of 2½ years, it developed, intellectually and otherwise, normally, walked normally and looked like a normal child, then it gradually developed paralysis, spastic in character, of the right arm, then spastic in character of the right leg, and then of the face, during a period of perhaps six or eight months In other respects the child was perfectly well, there was no headache and the child ate and slept well. One peculiarity about the case was that there was absolutely no syphilis and the mother gave birth to other children who are well The mother was addicted to drink, which was particularly manifested before the child was born Until Dr Mills spoke of the descending type Dr Hoppe was very much puzzled about this case Whether there was any other feature about the case that would develop in the future he could not say That particular manner of development of spastic paralysis in a child never occurred to him before There was no history of any infectious disease of any kind which might have caused an encephalitis

TECHNIC IN THE AFTER-CARE OF THE RADICAL MASTOID OPERATION *

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To remove diseased tissue thoroughly from the temporal bone, in cases of chronic suppuration, is an easy task compared with the difficulty of obtaining a resultant cavity absolutely free from granulations or discharge, and lined with healthy new epidermis To establish such a condition speedily is an end toward which we are all striving

When the first radical operations were done in 1889, it was no uncommon thing to have suppuration continue within the cavity for many months, healing was finally obtained only at the expense of much time and suffering, and was usually attended with considerable deformity To-day it is possible to have our exenterated cavity thoroughly healed in a comparatively short time, in many cases only five weeks, and with absolutely no post-aural deformity only a fine linear scar marking the line of incision

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* Read in the Section on Pathology [illegible] the American Medical Association at the Fifty-[illegible] June 1906

HISTORICAL REVIEW

How has this remarkable advance in the care of our patients been accomplished? It is not by the adoption of any one step, but rather by taking advantage of a series of improvements, as they have suggested themselves, that we are able to achieve a cure in practically as short a time as is usually allowed for the recovery of the simple Schwartze operation

In the earlier cases I saw, practically no attempt was made to close the posterior wound, and reliance was placed on plastic flaps turned into the cavity By the use of this method, it was practically impossible to obtain a flap long enough to reach into the inner wall of the antrum, and much surface was necessarily left uncovered Two places in particular almost always gave rise to considerable trouble in the way of granulation formation, namely, the facial ridge and the inner wall of the antrum Granulations from all directions would encroach on this small cavity, and it was only by means of the most active treatment and continual packing that they were kept down at all Even when new epidermis had formed, the organized granulations would have assumed such proportions that in many cases the antrum was practically obliterated

Suturing the posterior wound completely and obtaining primary union here was a distinct advance in the treatment This procedure was first advocated by Korner, to whom we are also indebted for the plastic operation on the meatus now so generally used There were still many problems connected with the epidermization of the cavity

As early as 1893 Thiersch grafts were being used by Stacke,[1] Urbantschitsch,[2] Jansen and others, in the effort to produce a lining of new skin in the cavity There were obviously many difficulties attending placing these grafts in good position and retaining them *in situ* until they could become attached to the walls of the cavity They were ordinarily placed on small spatulas, carefully floated from these into the selected place, and held in position by a small tampon of gauze, while the same procedure was employed with the next graft In this way a large portion of the cavity was covered, but inevitably there would be granular areas between these small islands of epidermis, and the effort to keep these granulations down while the new covering was spreading throughout the cavity required the utmost vigilance and care on the part of the attendant and consumed many weeks

The next important step in the rapid epidermization of the cavity was in the employment of larger grafts, first introduced by Ballance His method was to reopen the posterior wound at the end of from 10 to 14 days, and to place the grafts on the newly formed granulations, retaining them in place with gold foil

In 1899 Denker used a single large graft, applying it through the open posterior wound 2 to 4 weeks after the operation He was the first to use the open air method of treating the wounds, no packing of any kind being employed Practically all other operators have retained the graft against the walls of the cavity by means of some kind of packing Many, however, have recognized the necessity for using some smooth, pliable material next the graft to prevent it from adhering to the gauze, as evidenced by the gold foil used by Ballance and the silk tissue of Reinhard

A little over a year ago the practice of using one large graft for the entire cavity was attempted at our institution Simultaneously with this procedure, advantage was taken of the method of treating skin wounds without dressing, as employed in extensive burns of the surface This was a radical departure from the procedure which up to this time had been followed practically exclusively

The results in several of the first cases on which this method was employed were almost startling Complete epidermization of the cavity was obtained in from 5 to 7 weeks

But little change has been made in the routine during the past year, and repetition of the cases but adds cumulative testimony to the value of the method

TECHNIC

The procedure in detail, as now carried out in my practice, is as follows After a thorough bone operation, in which great attention is paid to detail, all bone being carefully smoothed down, Eustachian tube cleared out, and Korner flap turned into the mastoid, the whole cavity is packed with short pieces of iodoform tape, the pieces being perhaps one-half inch square The posterior wound is sutured tightly, and in most cases heals by primary union

Except to change the outer gauze, *this dressing is not* tampered with until one week from the day of the operation, when the patient is again etherized, the entire packing removed from the wound, all bleeding stopped, and any clotted blood removed It is of the utmost importance that all foreign substance, particularly pieces of the gauze packing, be removed from the cavity, otherwise failure of the graft to adhere must necessarily result While the operator is doing this, his assistant is removing the graft from the thigh, which has been prepared previously An ordinary amputating knife, freshly sharpened, and sterilized by dipping for one or two minutes only in 70 per cent alcohol, is the only instrument needed So delicate is the cutting edge necessary to obtain a proper result that boiling the knife will ruin it, and it is also practically impossible to employ the same knife twice without sharpening

It is often possible to secure a graft 2x3 inches After being separated from the thigh, the skin is spread out without being removed from the place from which it was cut, and a piece of peau de soie placed on it This gauzy tissue, with the skin adherent to it, is now carefully removed from the thigh The peau de soie is used to keep the skin from curling up, and also to serve as a protective medium between the graft and the gauze plug on which it is inserted into the ear This plug is prepared by taking several layers of gauze and winding it into a cone the apex of which will just fit into the middle ear and antrum, the remaining portion being loosely rolled so that it can be readily adapted to the shape of the cavity The skin graft is now placed on the end of this gauze plug The graft must [illegible] *be very thin,* of sufficient area to completely cover the [illegible] *surface of the* exenterated cavity, and carefully [illegible]*serted into position,* precaution being taken that the [illegible] *apex reaches the middle ear* The remainder of th[illegible]*e plug is then expanded* after entering the meatus s[illegible]*o that the graft shall everywhere come in contact with the granulating area This* completes the operatio[illegible]*of the skin graft The sutures* in the posterior wo[illegible]*and are usually removed at this time.*

An external d[illegible]*ressing is applied over the ear, and the* head again ba[illegible]*ndaged On the third day following the*

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1 Stacke "Die operative Freilegung der Mittelohrräume" Tubingen 1897

2 Urbantschitsch "Ohrenheilkunde," fourth ed., p 496

graft, and the tenth from the original operation, all dressings are removed, and from that time on no packings of any kind are employed When the gauze plug is removed the peau de soie almost always comes with it, leaving a perfectly clean cavity inside the temporal bone, in which can be seen the newly applied graft

It has been my custom to do as little as possible to this cavity for several days following the removal of the plug Within the first 24 hours after the ear is left exposed there will be more or less purulent discharge from the sloughing of the redundant folds of the graft. In a few days long strings of this sloughing material may be wiped out with the cotton stick Often by the end of two weeks of this open treatment a firm layer of new skin will be visible nearly if not quite all over the cavity, and suppuration will have ceased Usually the only granulations with which we have to deal are when the graft was not large enough to line the cavity to the outer part, there will be a ring of exuberant tissue around the meatus, and particularly at that part where the Korner flap was made This new tissue is easily kept down by use of a curette and caustics, however, and in the cases in which the graft is large enough to cover all denuded area inside the cavity does not bother at all The part which always gave most trouble with other systems of grafting, namely, the antrum, is always epidermatized from the start, as the portion on the apex of the plug must completely cover this part

CAUSES OF FAILURE

In some cases there has been a signal failure of the graft to adhere generally to the walls of the cavity, an recovery has been necessarily much delayed From a careful analysis of these cases it seems to me that failure has been due in all cases to some departure from the routine procedure here laid down

1 The first essential is a perfectly smooth cavity, free from any projecting edges or carious areas It is asking the impossible to expect any graft to take well on a surface to which it cannot be applied evenly

2 The next requisite is a large graft and a thin one No matter how expert the operator he cannot cut a satisfactory graft with a dull knife, and a thick dermis will not only roll so as to bother in the application, but it may not take at all

3 Careful preparation of the cavity immediately before the insertion of the graft There is a tendency toward bleeding on the removal of the packing put in at the time of the original operation This must be carefully checked, and all clots removed before applying the graft

4 The graft must be kept warm and moist, but little time should elapse between its cutting and the placing in position and extreme care be taken that it touches the cavity in all its parts[3]

DISCUSSION

Dr J C Blake, Boston, said that, having followed Dr Hammond at the Eye and Ear Infirmary, he knew that a part of the credit which Dr Hammond attaches to the method employed should be credited distinctly to Dr Hammond's own powers of differentiation and to his ability to adapt the handling of this method of treatment to the needs of the individual case Certainty of arriving more speedily at the desired result is most encouraging, as presented by Dr Hammond in giving the result of his experience It requires care not only in the preliminary operation but in the complete clearing of the cavity, a necessity in all mastoid and antrotympanic work and, in addition, an appreciation of the condition of the tissues to be grafted. The application of the graft, also, is a matter which requires considerable care. Dr Hammond makes a single graft application and then leaves the case untouched for some time That means that the application of the graft must be most thoroughly and carefully done, and the work is one which requires dexterity It is a most promising departure in the direction of rapid healing

Dr. E A. Crockett, Boston, said it has been his custom for two years to use a single large graft, as Dr Hammond describes, but applied at the time of operation The method has been successful, both when the dura was exposed during operation and when it was not exposed, but he is a little afraid to use it now when there is exposed dura. The method offers one less dressing to the patient and a few days' quicker healing when the graft takes If it does not take, regrafting can be done on the seventh to the tenth day, as if primary grafting had not been attempted. This, he thought, has been the custom in German clinics for some years With the single graft at time of operation another advantage is that the careful preparation of the graft does not seem so essential as when the graft is applied over a granulating surface Certainly a graft of decidedly greater thickness than Dr Hammond uses has had perfect staying power in a number of cases Dr Crockett has observed.

Dr. J F Barnhill, Indianapolis, said many operators seem to think that if they have done a thoroughly careful mastoid operation they have completed most of their work, whereas it has always seemed to him that the work has just begun when the extirpation of the bone is completed The success of mastoid operations depends very largely on that minute care in after treatment which Dr Hammond emphasized As Dr Hammond said, every portion of the graft must be applied to absolutely smooth surfaces It is in this lack of thoroughly smoothing the field that many get into trouble in so far as the "taking" of the graft is concerned It is always a question in smoothing down those parts which surround and lie in immediate proximity to such structures as the facial nerve and dura mater that operators are likely to meet with their greatest difficulty in preparing the bony surface properly without running the risk of injury to these important structures Dr Barnhill considers it much wiser to run some risk of failure to cure the patient than to persist in measures directed toward smoothing every part in the vicinity of the nerve, and thereby greatly endangering the functions of the facial, for if the patient were given choice in the matter he would always choose a running ear rather than a paralyzed face It requires a great deal of experience and discrimination in operating on the bone, and a great deal of care to know just how far the operator is to go in his efforts, not only to remove every portion of the diseased bone, but also to leave the parts smooth enough to be quickly covered by granulations or to receive a graft if one is applied If he goes just far enough, if his experience has been great enough so that he gets the field smooth and free from disease without entering the facial canal, then he has made an ideal preparation for the skin graft. Contrary to what Dr Hammond advises Dr Barnhill has for a long time preferred the Panse flap to the Körner for the reason that it gives a broader opening through which to conduct the after treatment But if one uses the Panse flap he must not stitch these flaps as Panse advises The original advice was to leave the postauricular wound open, and to stitch the flaps to the external skin It is clear that if this were done, closing the wound posteriorly as Dr Barnhill invariably does, there would be skin in approximation with new cut osseous surface, thereby inviting a fistula, which is to be avoided He, therefore, stitches these flaps to the periosteum, not in any definite position, but in that one which it is clear is the proper one at the time of operation, and in such position that when the postauricular wound is brought together the flaps will lie deeply [illegible] the cavity and in direct contact with the bone [illegible] ment of [illegible] he has been able to [illegible] tion It makes a [illegible] always see the ent[illegible] ess and can therefore give more rational after attention than is possible when other flaps have been selected at the operation

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[3] The following additional literature may be consulted Siebenman Berlin klin Wochschr 1893 p 43 Körner Arch. Otol xxxvii p 130 ibid xxi p 256 ibid. xxxv p 145 ibid xxxv p 144 ibid xlv p 186 Politzer Ohrenheilkunde fourth ed., p 404 Verhandlungen der Deutsch otol G Gesellschaft 1903 Blau Encyklopedia

Dr. A E. **Prince**, Springfield, Ill , said that in securing such a graft as Dr Hammond mentioned the difficulty will be experienced of securing a graft of uniform thickness Drawing the knife back and forth often produces a serrated graft This difficulty may be overcome by taking a piece of sterilized board, say from an ordinary cigar box Follow the edge of the board with a knife The board will keep the skin perfectly straight and tense, and in that way any length of graft desired may be obtained. Dr Prince has found that particularly useful in attempting grafts for the restoration of the orbit It may be from faulty technic in the operation but it has been Dr Prince's misfortune from time to time to have a little necrotic area follow

Dr **Cullen F Welty**, San Francisco, believes there is no one method that covers all points in different cases For this reason he uses different flaps in selected cases He tries to close every case if possible and in those he can not close because of pathologic lesions, he uses the Panse flap He thought it would be hard to adapt such a large skin graft to the cavity of the ear after operation It would be much easier to adapt smaller pieces to the various recesses and corners that are naturally encountered, than to cover the entire cavity with a single graft He does not think skin grafts should be used in cholesteatoma because the cholesteatoma dips into the individual canaliculi of the bone and continues to grow He would like to hear from Dr Hammond about skin grafting over the stapes, whether it is not likely to diminish the hearing much more than by the ordinary process

Dr **Kaspar Pischel**, San Francisco, showed a flap he has used for the last few years, and demonstrated his method as published in the *Archives of Otology*, xxx, No 2, 1901 His method assures a well nourished covering of the bone trough, while skin grafts alone furnish poorly nourished tegument

Dr **Philip Hammond**, Boston, said he expected there would be more opposition to the use of ether a second time during the operation, that is, doing the operation in two stages He has pronounced views on the subject, however, or he would not subject the patient to this extra inconvenience The cavity on which this operation is done of course contains more or less pus, granulation tissue and sometimes cholesteatoma It is difficult to get the cavity clean and aseptic. The skin graft applied primarily to such a cavity is not as apt to take, in a large number of cases, as after there is good healthy granulation tissue He packs the cavity with iodoform gauze and then does not touch it for 7 days On the seventh day when taken out the gauze is as clean as when introduced That gives a good clean healthy tissue on which to introduce the grafts The question of the flap to be employed, whether the Körner or the Panse, of course varies according to the conditions In some cases he has thought it necessary to use the Panse flap, but when he selected his case he prefers the Körner It can be made as broad as the canal will permit When thoroughly applied the flap helps to pin down the posterior wound that is sewed together and makes one solid mass

As to facial paralysis, it requires considerable experience and some knowledge of anatomy to do this operation thoroughly and save the patient from paralysis In something over 50 radical operations it has been his misfortune to encounter facial paralysis twice In the first case there was a fistula leading from the mastoid cavity into the facial ridge He wanted to get at the caries, and succeeded in removing it, but the patient suffered a facial paralysis That was 2 years ago To day the paralysis has disappeared. The other case was that of a young girl last year On getting into the antrum there was distinct caries and much granulation tissue all around the facial nerve, which could be seen plainly in the diseased tissue He left that as it was, but there was paralysis

As to the use of a board in making a graft, Dr Hammond referred to the excellent work done by his assistant Dr Tobey, in getting these grafts for all his private cases and most of his hospital cases Dr Tobey finds that he can get a decent graft by drawing the skin taut with the hand In that way there is little difficulty in securing a good graft As to the question of hearing when the skin is laid over the stapes, Dr Hammond has one patient in whom the hearing power remains at 20/35 In a still more recent case, the hearing increased from 1/35 to 10/35 As a rule there is a slight improvement in hearing following the operation Regarding the ability to see into the mastoid cavity with the closed posterior wound, it depends entirely on how much of the mastoid is taken out and how much facial ridge is left If the bone is removed close to the facial nerve there will be no difficulty in looking into all the parts, mastoid, antrum and middle ear

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ANASTOMOSIS OF BLOOD VESSELS BY THE PATCHING METHOD AND TRANSPLANTATION OF THE KIDNEY *

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DEFINITIONS

The patching consists of closing an opening in the wall of a vessel by fitting and sewing to its edges a flap taken from another vessel or from some other structure such as the peritoneum [1] For example, a portion of the wall of a carotid artery may be removed and the opening thus produced closed by a patch taken from the external jugular vein

The anastomosis by the patching method consists of extirpating a vessel together with an area or patch from the vessel of origin, the patch being so cut that the mouth of the extirpated vessel is situated in the center of the patch The edges of the patch are then fixed to the edges of a suitable opening made in the wall of another vessel. For example, a spermatic artery of a dog was dissected and removed with a triangular patch of the wall of the aorta surrounding its mouth The edges of this patch were then sutured to the edges of a suitable opening made in one of the femoral arteries The spermatic artery was thus anastomosed to the wall of the femoral artery (Fig 1)

AIM

We have attempted to develop a method of anastomosing blood vessels so that even in case of slightly imperfect technic resulting in the deposition of fibrin on the lines of suture, the circulation would not be disturbed

In methods hitherto employed, a fault of technic was sufficient to cause hindrance or even stoppage of the circulation In the simple transplantation of the kidney, for instance, the wall of the renal vessels is cut and sutured Then it happens that, in case of infection or fault of technic, fibrin deposits itself on the line of suture and occludes the lumen of the vessel, that gangrene or atrophy of the organ are very liable to result

In the anastomosis by the patching method the wall of the renal vessels is respected Instead of cutting the vessels themselves, we extirpate a patch of the aorta and vena cava, in the center of which is located the mouth of the vessel The edges of the flap are sutured to the edges of the aortic opening If infection occurs, a clot can be produced on the line of suture But this suture is located far from the mouth of the renal artery Thus, the circulation of the renal artery is not troubled As regards the aorta, a small clot adherent to its wall does not disturb its circulation Occurrence of gangrene in the transplanted organs is then almost impossible

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* From the Hull Physiological Laboratory University Chicago

[1] Carrell and Guthrie Resultats du patching des arteres Comptes rendus de la Societe de biologie de Paris June 22 1906

TECHNIC

The operation may be divided into two stages 1 Preparation of the vessel to be transplanted and, 2, transplantation on the second vessel For example, the anastomosis of the renal artery to the aorta in the transplantation of the kidney will be described

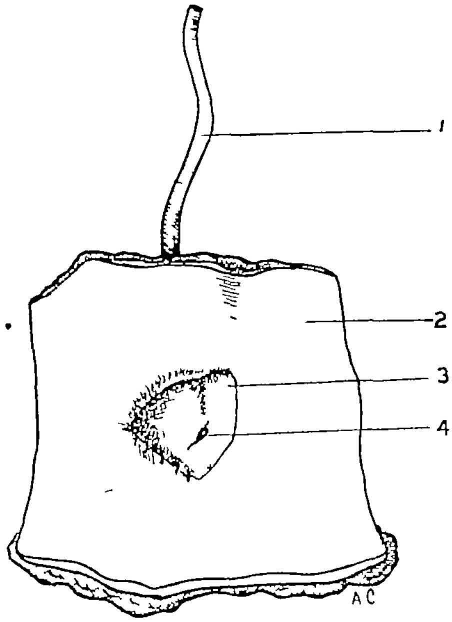

Fig 1 —1 Spermatic artery 2 wall of the femoral artery 3, aortic patch 4, mouth of the spermatic artery

1 Preparation of the Renal Artery and Aortic Patch —The aorta of the first animal is dissected to the level of the mouth of the renal artery The renal artery, however, is not dissected A patch of the aorta (Fig 2) surrounding the mouth of the renal artery is cut with scissors The patch should be triangular or elliptic in shape and the edges as regular as possible in order that a smooth anastomosis can be made

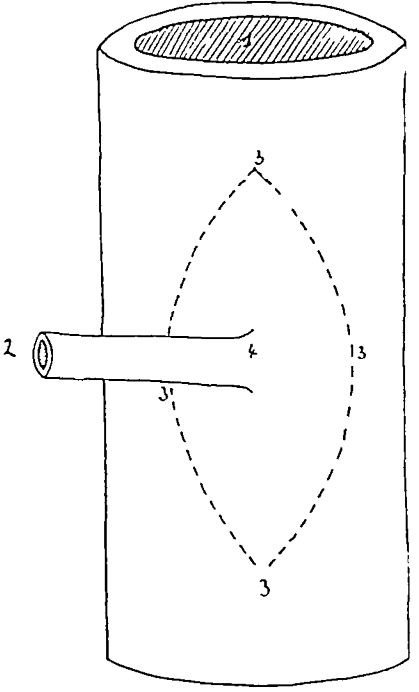

Fig 2 —1 Aorta of the first animal 2 renal artery 3 line of incision for the aortic patch 4 mouth of the renal artery

2 Transplantation of the Patch on the Wall of the Aorta of the Second Animal —The aorta of the second animal is dissected between the mouths of the renal and genital arteries The vessel being temporarily occluded both above and below, with one cut of the scissors an elliptic opening a little longer than the patch taken from the first animal is made in the wall of the aorta

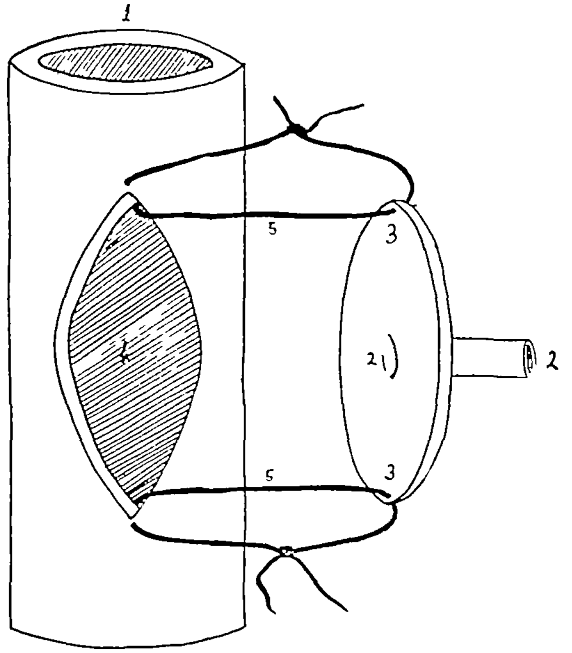

Fig 3 —1 Aorta of the second animal 2 renal artery 2 mouth of the renal artery 3 patch taken from the aorta of the first animal 4 aortic opening 5 threads uniting the ends of the patch and of the aortic opening

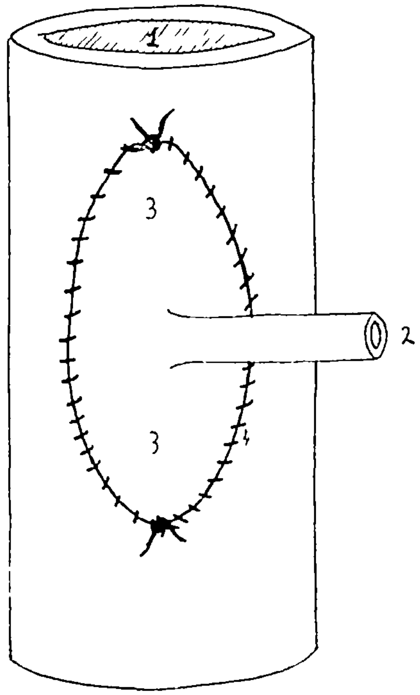

Fig 4 —1 Aorta of the second animal 2 renal artery 3, patch of the aorta of the first animal, 4 continuous suture

Each end of the … the
aortic opening by …
the patch and o
continuous sut

Anastomosis of the renal vein to the vena cava is performed in the same manner.

The circulation is re-established by releasing the vessels where they were temporarily occluded. The blood penetrates immediately through the renal artery into the capillaries of the organ and returns through the renal vein to the vena cava.

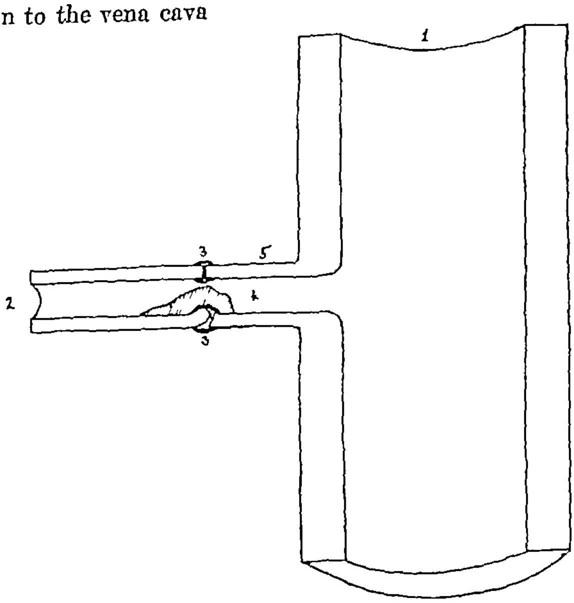

Fig. 5.—1, Aorta of the second animal; 2, renal artery of the first animal; 3, line of suture of the end-to-end anastomosis; 4, clot on a point of the line of suture with almost complete obliteration of the vessel; 5, renal artery of the second animal.

At the line of suture of the aorta a little blood may escape. This hemorrhage ordinarily stops of itself within one or two minutes, but if it continues it is easily controlled by one or two supplementary stitches. The operation is less difficult on the veins owing to their greater flexibility. For this reason the line of suturing on the vena cava is usually blood proof.

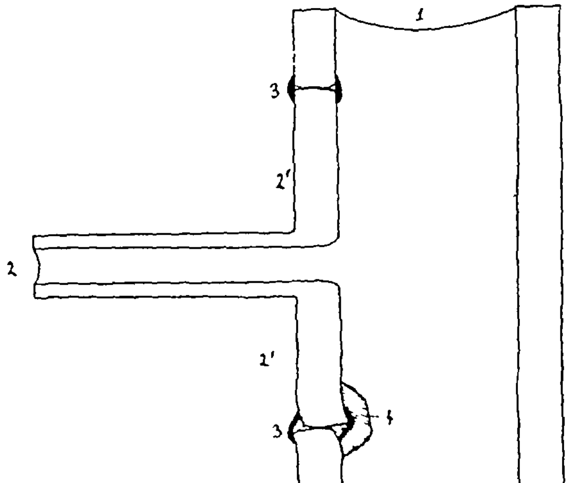

Fig. 6.—1, Aorta of the second animal; 2, renal artery and aortic patch taken from the first animal; 3, line of suture of the aortic patch to the edges of the aortic opening; 4, clot on the line of suturing.

The same method is well adapted to the anastomosis of the ovarian, spermatic and other vessels.

RESULTS

This method has been employed on cats and dogs in fourteen cases of transplantation of the kidney, in one case of transplantation of the ovary, in several experiments of simple patching (i. e., repairing openings in walls of arteries by flaps of vein or peritoneum) and in some experiments in which the animals were killed at the end of a few hours, such as the transplanting the head of an animal in the abdominal region of another animal.

Although infection often occurred, the circulation in the organs has nearly always been good, and in no case gangrene of the transplanted organ (kidney or ovary) has been observed.

(a) *Anatomic Results.*—Within a few days after the operation, the stitches placed in making the anastomoses became covered with a glistening substance similar in appearance to the normal endothelium. In some cases there was a very small ribbon-like deposit of fibrin around the line of anastomosis. Irregularly shaped clots sometimes occurred at points of defective union of the intimas. In a dog that died eight days after the operation from diffuse phlegmon of the abdominal wall, a clot was found tightly adherent to one of the ends of the patch. But the surface of the patch was smooth and the mouth of the renal artery was entirely unobstructed and normal in appearance. If such infection had occurred in a termino-terminal (Fig. 5) or termino-lateral anastomosis, obliteration of the vessel would probably have occurred. By the patching method, however, this accident had practically no effect on the circulation either in the aorta or in the renal artery (Fig. 6).

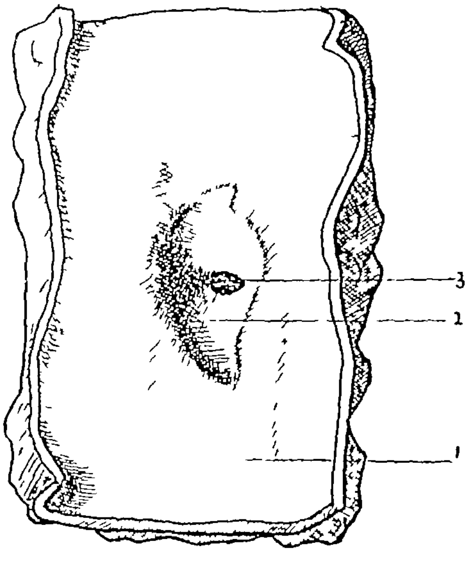

Fig. 7.—1, Wall of the aorta; 2, aortic patch; 3, mouth of the renal artery.

Anatomic union of the wall and the patch may occur rapidly after the operation. For example, fifteen days after transplanting the ovary of a pregnant cat into a small male kitten, it was practically impossible to distinguish the line of union of the patch of vena cava of the former to the wall of the vena cava of the latter. Also the union of the arterial anastomosis was excellent, the endothelium being smooth and glistening, but it was possible to distinguish the outline of the transplanted aortic patch. In some other cases small deposits of fibrin were observed on the line of the suture. They were very thin and, of course, did not interfere at all with the circulation. Specimens taken eight days, ten days, eighteen days, twenty-seven days, forty-three days (Fig 7) after the operation, and one taken five months after, show that the results remain excellent for these periods

(*b*) *Physiologic Results*—As soon as the blood is allowed to flow through the aorta, the circulation of the renal artery is re-established and appears to be practically normal The renal vessels are surrounded by their connective tissue and protected by the peritoneum Their caliber and their appearance are not modified The kidney is a little redder, harder and enlarged

Such animals walk, climb, jump and, in fact, comport themselves in a manner very like the normal the day following the operation and even, in some cases, within a few hours after the operation

A cat into which a kidney had been transplanted was anesthetized eight davs after the operation and its abdominal cavity opened by a transverse incision a little above the renal vessels The transplanted kidney was found covered bv glistening peritoneum without intestinal adherences The color of the kidney was a little redder, but practically normal, the organ was slightly increased in size The circulation was excellent and even greater than before the operation The only evidence of the operation was a bulging of the aorta and the vena cava at the point of anastomosis of the renal vessels The excellence of the physiologic result was presumably in a large measure due to the insignificant alteration of the condition of the renal vessels and the ureter from the normal

A female cat,[2] to which a kidney from another cat was transplanted four months ago, is now living in good health The transplanted kidney is enlarged Its consistency is a little harder and its form is normal By palpation the pulsations of the renal artery are easily detected and appear to be normal

These observations show that the results of the anastomoses by the patching method remain good for a long period

CONCLUSIONS

1 By the patching method, the termino-lateral anastomosis of blood vessels is more safely performed than by the other methods

2 It prevents the occurrence of gangrene after the transplantation of organs even in case of slight infection

3 The circulation of a kidney, transplanted with anastomosis of its vessels by the patching method, is excellent four months after the operation

Clinical Notes

ACETOZONE IN TYPHOID FEVER *

RAY HUMISTON, Ph G, M D
WORTHINGTON, MINN

For a number of years acetozone has been vigorously pushed in the treatment of typhoid fever, the manufacturers making the following claims

1 A greater freedom from intestinal disturbances such as characteristic odor of stool, diarrhea, tympanites, hemorrhage, perforation, peritonitis

2 A diminution of the toxemia, and the consequent improvement in physical and mental condition

3 The return to normal temperature more quickly

4 A modification of the course, severity, and type

5 Complications less frequent

6 Relapses less frequent

7 Recovery more prompt and certain

We will see how far these claims are substantiated in a short series of 10 cases in which records have been kept, bearing in mind that the series is too short to indicate very much either way All the patients in the series were treated by hydrotherapy with a milk diet. The acetozone solution contained from 15 to 20 grains to the quart, and was administered freely according to directions

FIRST CLAIM —FREEDOM FROM INTESTINAL SYMPTOMS

Findings

One only had diarrhea

Nine had constipation

Odor of stool was modified in all cases

Tympanites was troublesome in but 2 cases

Hemorrhage was present in 2 cases

SECOND CLAIM —TOXEMIA DIMINISHED WITH IMPROVED PHYSICAL AND MENTAL CONDITION

Findings	Slight	Moderate	Severe
Mental Impairment	4	1	5
Physical Impairment	3	2	5

These conditions seemed to go hand in hand The subjects taking the most nourishment were most free from both conditions, hence suggesting free feeding to overcome mental condition

THIRD CLAIM —QUICKER RETURN TO NORMAL

The fever was not considered absent until evening temperature was normal

Findings	
Minimum number of febrile days	18
Maximum number of febrile days	109
Average number of febrile days	43

By omitting 2 cases with relapse the average is brought down to 31 days

FOURTH CLAIM —COURSE, SEVERITY AND TYPE MODIFIED

Findings	
Average evening temperature first week	102 6
Average evening temperature second week	102 4
Average evening temperature third week	101 4

It should be noted that when temperature was 102 cold baths were administered every 3 hours

FIFTH CLAIM —COMPLICATIONS LESS FREQUENT

Findings

Two had pneumonia

Two had hemorrhage

Six had no complications

SIXTH CLAIM —RELAPSES LESS FREQUENT

Findings

One had 3 relapses, each of which took a typical course

Practically 4 relapses

SEVENTH CLAIM —RECOVERY MORE RAPID AND CERTAIN

Findings

Rapid recovery, 6

Prolonged convalescence, 2

Deaths, 2, pneumonia, 1, hemorrhage, 1

SUMMARY

Claim 1 Greater freedom from abdominal symptoms, claim justified

Claim 2 Toxemia decreased claim not justified

Claim 3 Quicker return to normal temperature, claim not justified

Claim 4 Course, severity and type modified, claim not justified

Claim 5 Complications less frequent, claim not justified

Claim 6 [illegible] quent claim [illegible] ified

Claim 7 [illegible] not justified

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[2] This animal was presented before the Section of Physiology of the meeting of the British Medical Association Toronto August 1906

* Read at meeting of Southwestern Minnesota Medical Society Luverne Minn July 12 1906

This brings us to the real value of the drug; it prevents intestinal fermentation with the consequent tympany and diarrhea, and, in my opinion, this in a measure increases the patient's comfort and chances of recovery, but it has little value above other intestinal antiseptics.

The question arises, however, whether we are not depending too much on remedies having a local action for a general condition. We were overdoing it in the case of antipyretics. Some one said: "The only advantage of an antipyretic is to let the patient die with a normal temperature." Are we not overdoing intestinal antisepsis? Are we not simply attempting to let the patient die with a sterile intestine?

NEW APPARATUS: (1) AN ASEPTIC PROTECTIVE SHEET FOR MASTOID SURGERY, AND (2) A PRACTICAL ALGESIMETER *

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BALTIMORE

I. ASEPTIC PROTECTIVE SHEET FOR MASTOID SURGERY

One of the important problems confronting the aural surgeon is the maintenance of strict asepsis of the mastoid wound without unduly disfiguring the patient, even temporarily, by extensive removal of hair. The practice of different operators, as regards the preparation of the field for a mastoid operation, varies from removal of only a small amount of hair immediately surrounding the area to be opened, to a close shaving of the entire head. I have never felt justified in exposing an extensive area of the scalp, except in a premeditated brain investigation, and yet, in my efforts to save the patient from unnecessary loss of hair, I have frequently been sorely troubled by hairs encroaching on the wound at a critical stage of the operation.

In preparing for a simple mastoidectomy it has been my custom to have the scalp shaved for a distance of approximately 3 cm. and 6 cm. posterior to the auricle, then to make a skin incision parallel to the postauricular sulcus and about 5 mm. therefrom throughout its curvilinear course. The scar following a wound so situated is well hidden by the auricle and causes the least disfigurement. My best efforts, however, to protect such an operation field, by the use of sterilized rubber caps or by the application of sterile towels wound about the head, have not been productive of satisfactory results. The most carefully applied headgear is apt to become loosened by manipulation attending the operation and to permit straggling hairs to wander into the field; particularly is this true when dealing with female patients in whom the mass of hair makes it more difficult to apply the towels tightly and the longer hairs are especially prone to creep from under cover. In order to obviate these difficulties I have had a special rubber sheet made that can be neatly applied and that will surely prevent any possibility of hair encroaching on the field even though the shaved region be a very narrow one.

About three years ago my attention was attracted by an illustration in the business catalog of the B. F. Goodrich Co. depicting a rubber operating sheet devised by Dr. Murphy of Chicago, for use in abdominal operations. This sheet consisted of a heavy rubber apron of sufficient size to cover the entire abdomen, and in its center was inserted a small square of thin rubber tissue. The skin surface having been cleansed in the usual way preparatory to operating, the sheet was to be laid over the abdomen so that the square of thin rubber tissue came over the area to be incised and this portion was made to adhere to the skin by the application of a solution of Para rubber in chloroform. The incision was then to be made directly through the thin rubber, as through an additional layer of skin. The entire sheet could be boiled with the instruments and its adjustment rendered it impossible for any extraneous matter to enter the wound except through the direct channel. It occurred to me at once that if such a device could be employed in mastoid surgery it would very much simplify the problem of operating without much loss of hair and greatly aid the surgeon's efforts to maintain asepsis throughout his work. In order to accomplish this I have experimented with sheets of different sizes during the past two years and I offer this pattern for consideration.

Description of Sheet and Method of Use.—It consists of a heavy rubber sheet 30x30 cm. with a thin rubber insert 7x7 cm. The latter is not placed directly in the center, but toward one corner of the sheet in order to bring the greater portion to lie above and behind the operation field, where it is most needed. The anterior edge of the thin rubber section is only partially attached to the sheet and a semilunar piece has been cut away so that the auricle can be drawn through the opening and the edge of the rubber will fit in close to the postauricular sulcus.

The mastoid region having been prepared in the usual manner for operation, a coating of Para rubber solution is applied to the skin and the protective sheet laid on and smoothed down in the proper position; it will adhere to the skin very quickly, very much as a collodion dressing does and no further fastening of the sheet is necessary, though there can be no harm in binding the loose portion of the sheet in place by sterile towels. The entire sheet can be sterilized by boiling and it may be used repeatedly but, of course, the thin insert will have to be removed and a new one attached for each case. As both sides are the same, this sheet can be used for operation on either mastoid by simply reversing it. In practical use it has given me a great deal of satisfaction but if any one can suggest any improvements to be made on it I shall be very glad to adopt them.

II. A PRACTICAL ALGESIMETER

Some accurate means of estimating the degree of tenderness accompanying inflammations of the mastoid bone is very desirable. No other symptom of mastoiditis is so constant and none compares with it in value when considering whether or not a given case requires operative intervention. Acknowledging its importance we have all been relying on the most primitive means of ascertaining its presence and intensity. Furthermore, we have been describing our examinations in the most inexact language as, for instance, when stating that "the mastoid was tender on slight pressure," or, "deep pressure produces exquisite tenderness," etc., such statements not conveying an intelligent idea of the exact amount of pressure exerted or the degree of tenderness elicited. What one examiner would call slight pressure might be regarded by another as firm or even deep pressure.

Hoping that such discrepancies might be prevented by the use of an instrument that will register the amount of force required to elicit the first sign of discomfort, empower the watcher to note the effect of increasing pressure, and permit the study of smaller points on the surface of the bone than can be palpated by the finger alone and, in addition that some standard might be established for recording the results of examinations made, the accompanying instrument was devised

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* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

Description of Instrument—It consists of a modification of the combined piezometer and algesimeter described by Dr Howard A Kelly[1] It is a fenestrated hollow cylinder in which a slender piston rod moves against a resistance coil The outer end of the rod is capped by a smooth, spherical button and the inner end is attached to an indicator that slides in the fenestrum The margin of the slit in the cylinder is marked to show the amount of pressure exerted on the piston, being graduated in hundreds from zero to 2 kilograms

With such a device it is possible to determine accurately, and to express in grams, the amount of pressure required to elicit tenderness at any particular spot If pressure be made with this instrument over the mastoid antrum or tip of a normal person the full amount of power it registers, 2,000 grams, will be borne without material discomfort In no case of mastoid inflammation in which it has been used, however, could such pressure be endured and, as far as can be said at present, the more advanced the mastoid disease the lower degree of pressure required to bring forth complaint of pain

DISCUSSION

Dr W Sohier Bryant, New York City, said that while he had used Dr Reik's device with considerable satisfaction, he had found the greatest difficulty, not in keeping the hair out of the wound at the time of operation, but afterward during the dressings He asked how Dr Reik manages to do that

Dr Philip Hammond, Boston, asked what Dr Reik does in case it is necessary to make a posterior incision as recommended by Whiting It often happens that after a patient is on the operating table the necessity for a more extensive posterior opening may arise Very likely the incision will invade the hair area unless the patient has been previously shaved At the Eye and Ear Infirmary it is the custom to shave the patient an inch and a half or two inches from the ear, to fasten long hair away from the auricle by collodion and perhaps by braiding the hair When the patient is on the table several layers of gauze with an oval hole cut through are placed over the auricle, leaving only the operative field exposed Various protective sheets are used, and, something that has not been described a tent is placed about the face of the patient in such a way that the etherizer has free access to the face without being in the operative field

Dr H O Reik Baltimore said that he disclaimed any credit for the sheet as an invention It is simply a modification of Murphy's rubber sheet In the original rubber dam Murphy used the rubber tissue simply fastened down to the skin There is no interference with the vascular condition As regards comparison with the collodion application, the advantage is it is so much more easily removed At the close of the operation you can tear off the entire sheet, and if any portion adheres it can be removed with chlorform He had heard from other sources the same objection to collodion that Dr Sprague mentioned Replying to Dr Hammond, he said he does not use the Whiting posterior incision He did not know whether operations differ in Baltimore from New York and Boston but he had very rarely found it necessary to make an incision such as Whiting has spoken of The sheet is not recommended for universal use, but for the average simple mastoidectomy in which the brain or neck is not entered and the operation is not extended, as in ligating the jugular when not anticipated prior to operation

ETHER-AIR ANESTHESIA OR THE DROP METHOD FOR THE ADMINISTRATION OF ETHER

FROM AN EXPERIENCE OF SIX HUNDRED AND FIFTY CASES *

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In the United States ether is generally the anesthetic of election, and in this country, at least, its administration is conceded to be attended with less danger than that of chloroform The universal method for the administration of ether is by means of the Allis or similar cone, and a universal principle governing its administration is that it should be given with the least possible amount of air

From the manner in which ether is generally administered by the cone, except when given by a skilled anesthetist, there is produced, besides the anesthetic effect one of partial asphyxiation

To exclude all fresh air by using a closed cone and wrapping a towel around the chin and the cone, to prevent the escape of the inhaled vapors and to force the re-inhalation of these vapors without admitting any fresh air, is to produce a partial asphyxiation

Ordinarily the ether is poured in the top or the bottom of the cone, which is then quickly lowered over the patient's mouth and nose, thereby forcing the inhalation of very dense vapors The condition of partial asphyxiation, plus the inhalation of dense ether vapors, is directly responsible for the coughing, struggling, frothing and cyanosis

With these points in mind, let us consider the open or drop method for the administration of ether with a large volume of air This is not a new method, for it has been used by individual surgeons for many years Today this method is in such favor that the labels on the Squib's ether cans have directions for fixing the cork for this drop method

TECHNIC OF THE METHOD

The ordinary Esmarch or chloroform mask, covered with six or eight layers of gauze, is held three or four inches above the patient's mouth and nose The patient is directed to count slowly after the anesthetist or to breathe in and out, or to blow the vapors away

The ether contained in the ordinary chloroform bottle with dropper is allowed to drop on the mask somewhat more rapidly than if it were chloroform The bottle is moved continuously, so that each drop falls on a different spot on the mask, and is thus thoroughly mixed with air, so that when it is inhaled from the mask it enters the lungs as a partially warmed gas well diluted with air The mask is lowered gradually, at the same time the drops of ether are increased until a very fine, continuous steady stream is being spread over the entire mask The mask is finally lowered until it almost touches the face

The average patient will be able to count from 70 to 80, some only 40 or 50 while others may count 120 before unconsciousness begins This will require from two to three minutes At the end of a period of from five to seven minutes the patient relaxes and becomes sufficiently unconscious so [illegible] operations [illegible] the operations may be [illegible] ne th

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1 Johns Hopkins Hospital Bulletin September 1904

* Read before the Cle

completed the patient is in a condition of surgical anesthesia To accomplish this from two to two and one-half ounces of ether have been administered and from twelve to fifteen minutes have elapsed

Once the patient is thoroughly anesthetized he is saturated, so to speak, and a lesser quantity of ether is given to keep him in this condition

During an operation lasting from one to one and one-half hours from five to seven ounces of ether are administered Soon after the anesthetic is discontinued the patient comes to and frequently awakens before leaving the operating room.

ADVANTAGES OF THIS METHOD

Some points of advantage of this open drop method as compared with the cone method in producing ether anesthesia are By the open method the patient takes in almost as much fresh air as when awake The loss of consciousness is due to the anesthetic effect of the ether, without the added partial asphyxiation Therefore, this method is one of purer anesthesia

By this method the factors of carbonic acid gas poisoning are eliminated and need not be considered The patient is so gradually introduced to the anesthetic that the change is a transitorial one, during which time the mind, brain, heart, lungs and circulating apparatus quietly assume the new condition of anesthesia

There is little, if any, choking, holding of breath, coughing, struggling, rigidity or vomiting The patient's eyes are bright, the skin is warm, the peripheral circulation about the face and head is almost a blush The perspiration is warm

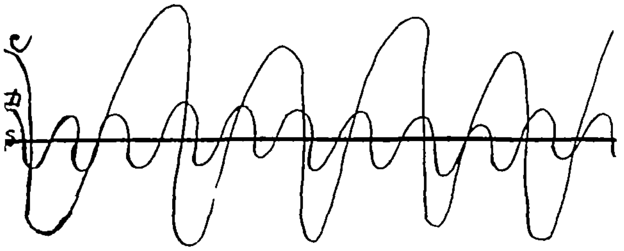

Fig 1—The anesthetic curve S, surgical anesthesia C cone method D drop method.

Considered as a whole, the patient appears more as if asleep than when under any other anesthetic

The dosage can be governed to a fine point and is within the control of the anesthetist The patient can be kept just under, and there rarely exists a state of profound anesthesia

THE ANESTHETIC CURVE

The difference in the anesthetic state between the cone and drop method is graphically illustrated by the diagram in which the abscissa line represents the line of surgical anesthesia and the line of ordinates the anesthetic curve

Assuming the patient near the point of surgical anesthesia by the cone method, a quantity of ether, usually from 3 to 4 drams, is poured into the cone This amount of ether reduces the patient to a profound anesthetic state, so that the curve falls from a distance above to a considerable distance below the line of surgical anesthesia After a time the ether in the cone is consumed, so that the anesthesia is no longer profound and the curve rises until another quantity of ether is added when it again drops

Now, assuming a patient near the point of surgical anesthesia by the drop method, a few drops of ether are administered almost continuously, so that the patient is at all times just near the point of surgical anesthesia The anesthetic curve is always only a little above or a little below the line of surgical anesthesia

By the cone method there must be considerable difference in the degree of anesthesia, while by the drop method the anesthesia is very even

GENERAL CONSIDERATIONS

This form of anesthetic is borne well by infants and the aged Again, bronchopneumonia in the young, or pneumonia in the aged, as a direct sequence to the anesthetic, does not seem to occur so often as when the cone is used This may be due to the fact that the ether is not taken in as a very dense vapor capable of abstracting large amounts of heat from the lungs, but enters the lungs as a gas already mixed with air and almost the temperature of the operating room

This comparative difference in temperature can be easily demonstrated by placing a finger under the mask and noting that it is not even chilled, while if the same operation is repeated within the ether cone, after the ether has been poured in, the finger will be almost as cold as though it had been sprayed with ethyl chlorid This chilling of the lungs, due to the abstraction of large volumes of heat, may be partially responsible for the pneumonias following ether anesthesias

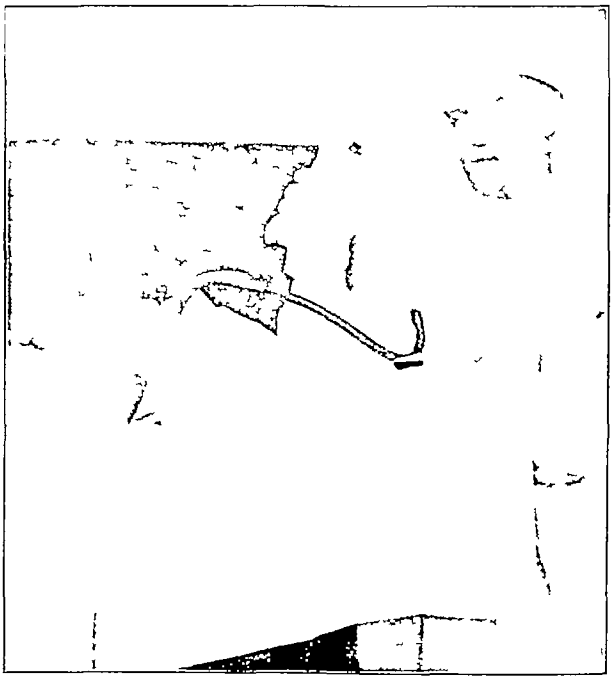

Fig 2—Crile's Method Pieces of gauze placed loosely in the funnel so as not to prevent expirations The top of funnel is covered with six thicknesses of gauze The ether is dropped slowly on the gauze great care being taken so it does not run into the tube and directly into the larynx The arm of the tube is lower than the patient's face to prevent the ether from dropping directly into the tubing The glass coupling makes it possible to see that the tubing is clear Stiff rubber tubing is used to prevent kinking and closing off of the tube By this method of anesthesia operation within the mouth, such as for cleft palate and those on the jaws, can be performed without the slightest interference on the part of the anesthetist.

By this open method, the after vomiting and retching is reduced to a minimum and I have found it not only far less than when using the cone, but much less than when chloroform is given If the retching and after-vomiting is reduced, then, not only will there be a great deal less discomfort to the patient, but severe postoperative dangers are often prevented

This method is just as applicable to alcoholic patients as any other method of anesthesia I have administered it to many of the patients at the St Alexis Hospital during a period of one and a half years, and at Mount Sinai Hospital, Cleveland, where I have been staff anesthetist for a period of three years

The total amount of anesthetic used for the average patient during an operation, lasting from one to one and one-half hours, will be from 5 to 7 ounces, and this, I may add, is less than the average amount I have found necessary when using the cone

The disadvantages to many who have tried this method are, first, getting the patient under the influence and, second, keeping the patient under the control of the anesthetic However, if one recalls his first experiences in giving chloroform or ether, he will remember that he experienced not only the same difficulties, but only too often was confronted by the more serious problem of bringing the patient out from a profound anesthesia By the drop method the dangers of profound anesthesia are less than when using the cone, and for this reason, if for no other, it is a safer method in the hands of the inexperienced

If the cone is to be preferred to the mask for the administration of ether, then use the open cone Pour the ether, in small quantities, in from the top, lower the cone gradually, do not bring it in close contact with the face, and do not wrap a towel around the chin and cone If the ether is given in this manner and compared with the usual method, the anesthetist will note such a marked improvement in so many points in the anesthetic as to arouse his astonishment A lesser quantity of ether will be used, the patient will be just under and will awaken very soon after removing the cone

The advantages of the ether-air anesthesia are well demonstrated in operations within the mouth, when the anesthetic be given through a funnel, covered with layers of gauze and containing pieces of gauze, from which two rubber tubes lead to the nostrils Here the ether is poured gradually on the gauze and mixed with the air *ad libitum*

After having given 370 chloroform anesthetics, 260 anesthetics by means of the Allis or similar cones and over 650 anesthetics by the open or drop method, I desire to state as my positive convictions that, from all points of view and after consideration of the many factors which must be considered in administering an anesthetic, I firmly believe that the open or drop method of giving ether is far superior to the closed or cone method This open drop method may be properly designated ether-air anesthesia

1242 Willson Avenue

DANGERS IN THE USE OF ADRENAL PREPARATIONS

F C BENNETT MD
LORING, LA

In an article in The Journal, Oct 13, 1906, Dr B H Potts, of Philadelphia, warns the profession of some of the dangers of suprarenal preparations The following case illustrates a danger in the indiscriminate use of the drug

A negro, aged 26, male, very rugged and healthy, had a stricture of the urethra After some difficulty I succeeded in passing a No 24 French sound When the sound was withdrawn considerable blood followed it, which greatly alarmed the patient Thinking to quiet his fears I injected into the urethra about half a dram of adrenalin chlorid (1 1000) In about thirty seconds the patient became restless and moved about, staggered and was laid on the couch He complained of intense pain about the heart and his breathing was labored and very rapid The heart beat was so fast that I could not count it The conjunctiva was blanched Profuse perspiration broke out all over the body, and the extremities became very cold The man declared that he was dying and I was inclined to believe him In about five minutes he began to cough and spat up mouthfuls of bloody froth The coughing and spitting of blood continued for over an hour The pulse, which had been very hard, became soft and slow

The patient gradually became quieter and the symptoms subsided. He slept fairly well the following night and rose the next day very little the worse for his experience

I gave him morphin, atrophin and nitroglycerin hypodermatically during the continuance of the alarming symptoms

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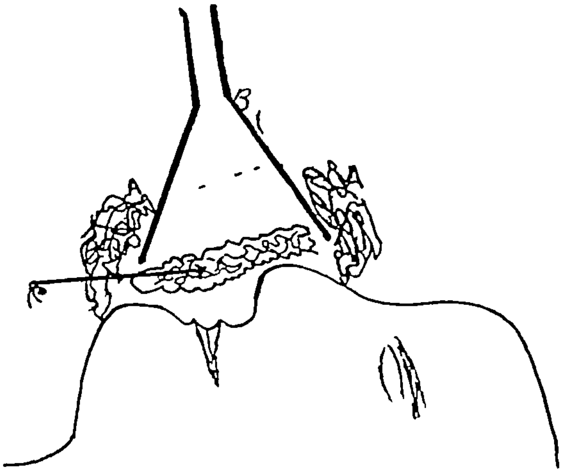
ETHYL CHLORID AS A GENERAL ANESTHETIC

A E OSMOND, M.D
CINCINNATI

I have lately noticed in The Journal various articles on the use of ethyl chlorid as a short general anesthetic, and some specially constructed masks.

To my mind the latter are too expensive for the general practitioner, and I desire to present a method that I use in the receiving ward of the Cincinnati Hospital.

With the patient on his back, I place over his mouth and nose two layers of thin gauze Over this I place a tin or glass funnel around the bottom of which is wrapped a towel, as shown in the accompanying illustration The ethyl chlorid is sprayed down the small end of the funnel



A, towel B funnel C gauze

The gauze keeps the nose from being frozen, and the towel prevents too great a loss of ethyl chlorid yet gives free access of air, so that the vapor can not be too concentrated The patient readily goes to sleep

The expense of such an outfit is about 10 cents, it works equally as well as the more expensive apparatus, and can be had at a moment's [illegible] it dail [illegible] ny [illegible] eman l
ing a short gen [illegible] n
dislocated sh [illegible]
happy result
are u ed for

New and Non-Official Remedies

The following articles have been tentatively accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in the proposed annual, "New and Non official Remedies" Their acceptance has been based largely on evidence supplied by the manufacturer or his agent, but to some extent on investigation made by or under the direction of the Council. Criticisms and corrections are asked for to aid in the revision of the matter before final acceptance and publication in book form.

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that so far as known it complies with the rules adopted by the Council

W A PUCKNER, Secretary

(*Continued from page 1565*)

PEGNIN

MILK SUGAR RENNET

The milk-curdling enzyme of calf's rennet, diluted with sugar of milk and sodium chloride

It is prepared by mixing pure rennin with milk sugar and sodium chloride

It is a fine white powder having a sweet saline taste, readily soluble in water, and forming a solution which readily and rapidly coagulates the casein of milk.

On adding 2 Gm of pegnin to 200 Gm of milk, which has been boiled and cooled to 40°C (104° F) and shaking the mixture, the milk should be completely coagulated in from 3 to 4 minutes and after vigorously shaking the curd should be finely divided and equally distributed throughout the liquid. A solution of 1 Gm. of pegnin in 50 Cc of water, should require 17 to 17 5 Cc. of tenth normal silver nitrate for complete precipitation, equivalent to 10 per cent. sodium chloride

It is incompatible with a temperature higher than that indicated for the fermentative action

Actions and Uses—Producing a finely divided coagulum, it obviates the formation of the clotty curds which are liable to be produced when untreated cow's milk is taken as food Cow's milk coagulated with pegnin as described below is said to be particularly serviceable for infant feeding and well adapted as a food for adults in stomach affections and in disturbances of the digestion incident to infectious diseases, in hyperacidity, etc

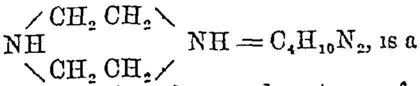
Dosage—8 to 10 Gm (120 to 150 grains) of pegnin are required for 1 liter (34 fluidounces) of milk, previously boiled and cooled to about 40° C (104° F) The mixture, after brief shaking, is allowed to stand 2 to 3 minutes or until it is completely coagulated, and then shaken vigorously during several minutes until the coagulum has been converted into a smooth, homogeneous mixture, and set aside in a cool place It is transferred to the nursing bottle as required and heated in warm water to the body temperature (37 5° C, 99 5° F) before feeding infants

Manufactured by Farbwerke vorm Meister, Lucius & Bruening Hoechst a M (Victor Koechl & Co New York) U S patent No 700 631

PIPERAZINE

DIETHYLENDIAMINE ETHYLENE-IMINE PIPERAZIDINE

Piperazine,



$$NH\begin{array}{c}\diagup CH_2\,CH_2\diagdown\\ \diagdown CH_2\,CH_2\diagup\end{array}NH = C_4H_{10}N_2,$$

is a synthetic base obtained by the condensation of two $CH_2\,CH_2$ groups, with two NH groups

It is prepared by the interaction of ammonia on ethylene chloride treating the complex mixture of different salts produced with sodium nitrite at 60° to 70° C. (140 to 158 F) purifying the sparingly soluble dinitroso-piperazine which separates as a scaly crystalline mass by repeated crystallization from hot water and subjecting the pure dinitroso piperazine so obtained to distillation with an alkali It is also prepared by several other patented processes.

It forms colorless lustrous tabular crystals hygroscopic, which melt at 104° C (219 2° F) It is extremely soluble in water forming strongly alkaline but non-caustic solutions It is not so readily soluble in alcohol It is volatile It forms soluble salts with acids and with uric acid it forms a very soluble salt (in 56 parts of water lithium urate requires 368 parts of water) It is not affected by chromic acid, but is slowly oxidized by potassium permanganate

In aqueous solution it gives a characteristic scarlet red precipitate with potassium bismuth iodide a white precipitate with Nessler's reagent, and is precipitated light blue by copper sulphate, white by mercuric chloride, lemon yellow (crystalline) by picric acid and grayish by tannic acid

It is incompatible with acetanilide, acetphenetidin (phenacetin) alkaloidal salts, nitrites, metallic salts in general and with picric and tannic acids. It should not be exposed to moisture.

Actions and Uses—A part of the piperazine ingested passes undecomposed into the urine and is claimed by some to form a very soluble compound with the urinary uric acid, others state that the piperazine which is excreted is largely in combination with the stronger mineral acids It has been shown that urine containing piperazine has no greater solvent power on uric acid than ordinary urine It seems to produce no symptoms in man or animals, even when administered in fairly large quantities, although it is stated that, after large doses, tremors, clonic spasms and general depression have occurred

Piperazine has been recommended for the prevention of the formation of renal and vesical calculi and for the relief of irritation of the bladder due to excess of uric acid in the urine and in cases of chronic gout, rheumatism, renal colic, etc The attempt to secure the solution of uric acid in the body by this as well as other remedies has not been successful in the experience of many clinicians

Dosage—0 3 to 0 6 Gm (5 to 10 grains), daily dose, 1to 2 Gm (15 to 30 grains) Owing to its hygroscopic character, it is impracticable to dispense it in powder, it should, therefore, be dispensed in solution in water, plain or carbonated, but in quantities sufficient for a day's supply only

Manufactured by Farbenfabriken vorm Friedr Bayer & Co Elberfeld Germany (Continental Color & Chemical Co, New York) U S patent No 482 108 Also by Chemische Fabrik auf Actien vorm E Schering Berlin (Schering & Glatz New York) U S patent No 548,214

POLLANTIN (Fall)

DUNBAR'S SERUM

An antitoxic serum from horses treated with pollen toxin derived from ragweed

Horses are injected with gradually increased doses of pollen toxin (derived from ragweed), which results in the formation of an antitoxin after two or three months of treatment. The horses are then bled and the strength of the serum is estimated by determining the proportion which will prevent the action of a solution of pollen toxin of which one drop is barely sufficient to produce a reaction when instilled into the conjunctival sac of a hay fever patient. The serum is preserved by the addition of 0 25 per cent. of phenol

It is a clear slightly yellowish liquid having the odor and taste of a dilute solution of phenol On standing the liquid deposits a slight precipitate The liquid is alkaline in reaction and not irritating to the normal conjunctiva.

It should neutralize the effects of a solution of pollen toxin when mixed with it and dropped into the eye or when a drop is applied immediately after a drop of the toxin solution.

The liquid does not keep well if exposed to the air When it becomes cloudy or a bad odor develops, decomposition has occurred and the preparations should no longer be used

Actions and Uses—It has no pharmacologic action except the neutralization of the pollen toxin The serum is not intended for use hypodermically It is employed for the relief of hay fever, it may be used as prophylactic

Dosage—One drop should be instilled by means of a pipette into the outer angle of each eye and one or two drops into one nostril, the other being kept closed, every morning before rising If the first application causes sneezing or reddening of the mucous membrane of the eye, it is recommended to repeat the application, even for the fourth time, if necessary

Manufactured by Schimmel & Co Miltitz near Leipsic. (Fritzsche Bros New York) U S patent No 745 333

POLLANTIN POWDER (Fall)

A powder obtained by evaporating, *in vacuo,* pollantin serum derived from ragweed toxin at about 45° C (113° F) and mixing it with sterilized sugar of milk

It is fine slightly yellowish, almost odorless powder almost but not entirely soluble in water, and having a slight alkaline reaction The tests are the same as for the liquid It should reduce Fehling's solution The powder keeps well

Actions and Uses—The same as those of the liquid

Dosage—The powder is applied to the eyes by dusting on the conjunctiva and to the nose by snuffing into one nostril, the other being closed, a piece as large as a lentil

Manufactured by Schimmel & Co , Miltitz, near Leipsic (Fritzsche Bros New York)

PURGATIN

ANTHRAPURPURIN DIACETATE PURGATOL

Purgatin, $C_{14}H_5(OH)\ (CH_3COO)_2O_2{=}C_{18}H_{12}\ O_7$, is the diacetyl ester of trihydroxyanthraquinone (anthrapurpurin)

According to the patent specifications it is obtained from anthrapurpurin or 1 2 7 trihydroxy anthraquinone, through acetylization by boiling for a stated time with acetic anhydride, or a mixture of acetyl chloride and acetic acid, or a mixture of acetic acid and phosphorus oxychloride.

It is a voluminous, orange-colored, crystalline powder melting at 175 to 178 C (347° to 352.4° F) tasteless and insoluble in water and in dilute acids but slowly soluble in weak alkaline solutions, splitting off anthrapurpurin which is manifested by the development of a deep violet red coloration

It is incompatible with alkalies and their carbonates.

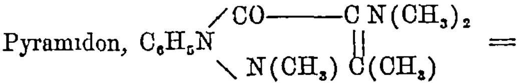
Actions and Uses—It is a laxative, said to be free from by-effects Being insoluble in dilute acids, it passes unchanged into the intestinal tract, where it is slowly split up and produces painless peristalsis The urine behaves as it does after the ingestion of rhubarb It has a reddish color and reduces Nylander's reagent Purgatin is recommended as a mild laxative

Dosage—0 5 to 2 Gm (7 to 30 grains), according to individual idiosyncracy, in powder, capsules or tablets, taken at night

Manufactured by Knoll & Co , Ludwigshafen a Rh. and New York. U S patent No 678,070

PYRAMIDON

DIMETHYLAMIDOANTYPYRINE



$$\text{Pyramidon, } C_6H_5N\begin{cases}CO\text{———}C\,N(CH_3)_2\\ \qquad\qquad\ \ \|\\ N(CH_3)\ \ C(CH_3)\end{cases} =$$

$C_{13}H_{17}N_3O$, is phenyl-dimethyl-dimethylamido-pyrazolon, a substitution product of antipyrine, $C_{11}H_{12}N_2O$, into the molecule of which a dimethylamino group, $N(CH_3)_2$, has been introduced

It is prepared by the reduction of nitroso-antipyrine to amidoantipyrine and treating this with methyl chloride or iodide

It forms small, colorless slightly alkaline crystals melting at 108 C (226 4° F) almost tasteless soluble in 11 parts of cold water and readily soluble in alcohol ether and benzene Its aqueous solution saturated at 70 C (158 F) deposits oily globules of pyramidon on boiling

Ferric chloride colors the neutral or slightly acidulated solution of pyramidon a bluish violet color nitrous or nitric acid produces a fugitive blue-violet color silver nitrate produces an intense violet coloration when added to the aqueous solution followed by the formation of a black precipitate of metallic silver, and the same color is produced by platinum chloride by ammonium persulphate and by lead dioxide. In hydrochloric acid solution pyramidon gives a fine crystalline double salt with mercuric chloride

Its incompatibilities are in general the same as those of antipyrine. Oxidizing agents (also acacia) often produce colored solutions

Actions and Uses—Pyramidon acts as an antipyretic and anodyne, like antipyrine but is effective in much smaller doses The action while somewhat slower at the beginning, is more lasting It is claimed to be devoid of harmful influence on the blood, heart or kidneys, to the contrary, it is said to stimulate the heart's action It has been recommended particularly in the chronic fevers of tuberculosis, as well as in the acute febrile conditions incident to typhoid fever, erysipelas and pneumonia

Dosage—0 3 to 0 4 Gm (5 to 6 grains), most conveniently in the form of tablets, a single dose usually sufficing for 24 hours

Manufactured by Farbwerke vorm. Meister Lucius & Bruening Hoechst a. M. (Victor Koechl & Co , New York) U S patent No. 579,412.

PYRAMIDON NEUTRAL CAMPHORATE

This compound, $(C_{13}H_{12}N_3O)_2\ C_{10}H_{16}O_4$, is a neutral salt of pyramidon and camphoric acid

It is prepared by combining its components with the aid of suitable solvents under exclusion of light moisture and heat

It is a white crystalline powder melting (indefinitely) at 80 to 90° C. (176 to 194 F) It dissolves with acid reaction in 15 parts of water or 2 parts of alcohol

It gives the characteristic reaction of pyramidon (which see) with silver nitrate If the solution in hot water is made alkaline with caustic soda the pyramidon may be shaken out with chloroform , if the residual aqueous liquid is then acidified with sulphuric acid the camphoric acid (melting point 186 C. 366 8 F) may be shaken out with ether

Actions and Uses—See pyramidon acid camphorate

Manufactured by Farbwerke vorm Meister Lucius & Bruening Hoechst a M (Victor Koechl & Co , New York) U S patent No 686,098

PYRAMIDON ACID CAMPHORATE

This is an acid salt of pyramidon and camphoric acid, $C_{13}H_{17}N_3O\ C_{10}H_{16}O_4$

It is prepared under the same conditions as the neutral salt.

It is a white crystalline powder of acid reaction melting (indefinitely) at 84° to 94 C. (183 2 to 201.2 F) , soluble in 20 parts of water or in 4 parts of alcohol

The tests are the same as for the neutral salt.

Actions and Uses—The acid and neutral salts combine the antipyretic action of pyramidon with the antihydrotic action of camphoric acid It is claimed that in these compounds the respective action of the component is modified, the antihydrotic effect of the camphoric acid being materially increased, while the toxicity of the pyramidon is diminished In the neutral salt, the antipyretic action of the pyramidon predominates, in the acid salt the antihydrotic effect of the camphoric acid

They are particularly recommended in the febrile conditions of phthisis, attended by profuse sweating

Dosage—Neutral camphorate, 0 5 to 0 75 Gm (8 to 12 grains) , acid camphorate, 0 75 to 1 Gm (12 to 15 grains), given in powders or aqueous solution

Manufactured by Farbwerke vorm Meister Lucius & Bruening, Hoechst a. M (Victor Koechl & Co New York) U S patent No 686 909

PYRAMIDON SALICYLATE

Pyramidon salicylate, $C_{13}H_{1}\ N_3O\ C\ H_6O_3$, is an acid salt of pyramidon and salicylic acid

It is prepared by combining its components with the aid of a suitable solvent and avoidance of exposure to light moisture and heat.

It is a white crystalline powder having an acid reaction and melting indefinitely at 68 to 70 C (154 4 to 158 F) It is soluble in 16 parts of water or 5 to 6 parts of alcohol

The aqueous solution is colored intensely red by ferric chloride and produces a white precipitate with silver nitrate the solution assuming a violet color after a short time

It is incompatible with ferric salts

Actions and Uses—It is antipyretic, analgesic and antiseptic, combining the activity of its components

It is recommended in rheumatic and gouty affections neuralgia, pleuritis, etc.

Dosage—0 5 to 0 75 Gm (8 to 12 grain) in powder or aqueous soluti

Manufactured ter Lucius
Hoechst a M. (York)
680 278

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[For other information see second page following reading matter.]

SATURDAY, NOVEMBER 17, 1906

THE PHYSIOLOGIC STANDARDIZATION OF DRUGS

The scientific striving for exactness has led to two distinct tendencies in materia medica. The first consists in the substitution of the active principles isolated from a drug for the crude drug itself. This is undoubtedly the correct and scientific method, when the isolated principle really represents the full therapeutic value of the drug, but, since this is by no means always the case, the method has its limitations.

The second method consists in the estimation of the strength of a crude or unstable drug by assay processes, i. e., by the determination of the amount of some active constituent contained therein. Perhaps the most notable advance in the new U. S. Pharmacopeia consists in the increased requirements in this respect and in the greatly enlarged list of drugs and preparations for which an assay is directed. With the single exception of diphtheria antitoxin, these assays are all based on chemical methods, in accordance with the instruction of the pharmacopeial convention. It is well known, however, that there are many medicinal substances—including such important articles as digitalis, ergot, strophanthus, suprarenal gland, etc.—for which no satisfactory chemical assay has been elaborated, but the strength of which can be ascertained by appropriate experiments on animals.

These so-called physiologic assay processes yield very satisfactory results with many drugs, and are usually not difficult to execute for those trained in the technic of animal experimentation. It is doubtless true that this training is not possessed by the pharmacist. The expense of these tests is also such that it would not be profitable to apply them on a small scale, but they can be applied in the large manufacturing houses, or by the importers of crude drugs, and, indeed, a very large part of the credit of introducing these methods of standardization is due to the individual enterprise of American firms. Since each firm, however, uses its own methods and standards, a "standardized" product of one maker may be very different from that of another; indeed, in the absence of published standards, we have little more than the word of the manufacturer for his statement that his product has been assayed. To illustrate, we may again refer to the reports[1] of Hunt and of Sollmann and Brown on suparenal preparations. All the manufacturers claimed a uniform strength, i. e., one part of the alkaloid in 1,000 of solution. Two makers, X and Y, emphasize in their advertising that they assay each lot physiologically; if the same standards were used, the products should be uniform, but, as a matter of fact, X is found 50 per cent. stronger than Y. A third maker, Z, advertises that all his products are of the highest standard, and subjected to chemical and physiologic assay. Hence, his suprarenal solution should be expected to come up to X, or at least Y. In fact, however, it is but a fifth as strong as X. We have no reason to believe that the manufacturer of X is honest and those of Y and Z intentionally dishonest. It is much more likely that they all standardize their products, but that they do so by different standards. And this must necessarily continue until official sanction is given to some single standard, and fairness to the manufacturer as well as to the public would seem to require this.

It would be a mistake, we believe, to make these assays compulsory, in view of their impracticability for the retail pharmacist, but there could be no objection to introducing official methods and standards to which such preparations which are simply marked "physiologically assayed" must conform. This would give a definite meaning to a term which is now most indefinite. It would leave the manufacturer free to use other methods, should he so desire, but would compel him to state the fact. It may also be remarked that the warranty clause of the new Pure Food Law would relieve the retail pharmacist from the responsibility for tests which he could not himself execute.

It is to be hoped that the next pharmacopeial convention will appreciate the importance of this subject, and direct the adoption into the United States Pharmacopeia of suitable standards (optional if need be) wherever practical and advisable. It will be a matter of ten years, however, before the next Pharmacopeia becomes official, and the matter is too pressing, at least as regards the suprarenal preparations, to be shelved in the meantime. The adjustment of these standards would require considerable original investigation, which should be started at once.

The further question as to what body should take the initiative in this movement may be a rather delicate one, but, in view of the importance of the subject, all secondary consideration should be laid aside. It would seem that the best method to give immediate effect would be for the Hygienic Laboratory of the U. S. Public Health and Marine-Hospital Service to take up the matter, as it has facilities to do this work. Undoubtedly, the manufacturers would cooperate in this, as they have done in the stardardization of diphtheria antitoxins, which has been done by the above laboratory with such satisfactory results.

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[1] The Journal A. M. A., Sept. 8, 1906, p. 790.

THE DESMOID REACTION IN GASTRIC DISEASES

While the value of the stomach tube as a diagnostic agent can not be denied, it is safe to affirm that there are drawbacks to its use, which, at times, are serious Aside from the definite contraindications to the use of the tube, some patients are so impressed by the obvious discomforts attending its use, and are rendered so nervous by the thought of it, that they refuse point blank to have the instrument introduced After the test meal has been given, and has been successfully withdrawn, there is always more or less doubt whether the secretion of the acid and ferments of the stomach can be regarded, under the peculiar circumstances, as even approximately normal The test meal is bland and unirritating and hardly comparable in stimulating power to an ordinary meal, and, moreover, the psychic condition of the patient is very frequently such that some disturbance in the secretion of the digestive juices is almost to be anticipated It must be remembered also that the test meal, withdrawn, as it is, after an hour, undergoes changes in the stomach which may result in the neutralization of a certain amount of acid

Some time ago Sahli, impressed by the drawbacks of the ordinary test meal, suggested the use of a method of examination which he named the desmoid reaction The reaction has as its basic principle the fact that the gastric and pancreatic juices act independently and in a totally different manner Sahli's idea was to find some substance digestible by the stomach juice, but not by the pancreatic or intestinal fluids, and to enclose in this substance medicaments which would be absorbed by the stomach and appear in characteristic form in the secretions After some experimentation, he has decided that methylene blue and iodoform are the most suitable chemical substances, as they are excreted by the urine, and can be easily recognized therein To protect them from the action of the pancreatic and intestinal juices they are made into a small pill, wrapped in a small square of rubber tissue, and protected from the action of the intestinal digestive ferments by closing the rubber tissue bag with catgut As both catgut and rubber tissue are impermeable to the pancreatic and intestinal juices the methylene blue and iodin do not appear in the urine if gastric digestion is markedly deficient In the case of normal gastric digestion the catgut string is dissolved, allowing the square of rubber tissue to be opened, and permitting the absorption of the methylene blue and iodin The latter substances may be given separately or combined, usually the latter, are administered as described above, at the beginning of the noon meal, and are tested for at 5 and 7 o'clock in the evening, and again on the following morning Usually, too, the saliva is tested at the same time for the presence or absence of iodin

The desmoid reaction has several advantages over the use of the stomach tube It is not a very disagreeable procedure to swallow a small rubber-coated pellet, certainly by no means so unpleasant as the usual performance with the stomach tube, the reaction is brought about under the normal circumstances of digestion, it may show digestive power where a test meal has shown no acid whatever, and it shows not merely the presence or absence of certain substances, it shows functional ability Its absence with a normal gastric juice indicates excessive motility of the stomach The main drawback, according to Monod,[1] is that it does not show when an excess of acid is present While the desmoid reaction will probably prove to be a valuable adjunct to the ordinary gastric examination, it is not likely that it will entirely replace this No doubt it will tend to reduce the number of patients who have to be put through the ordeal of the stomach tube, if it is used as a preliminary test, it will be useful also in showing remaining gastric function, and perhaps in indicating a more favorable prognosis, in patients whose secretion has seemed entirely lacking in digestive power when tested in the ordinary way Evidently it can not take the place of the ordinary examination in hyperchlorhydria, and this must not be forgotten

THE MIGRATORY NEEDLE STORY

Every now and then in the newspapers there is a wonderful story of a needle that entered the body of a person many years ago and, after remaining there, giving absolutely no sign of its presence, makes its appearance at a more or less distant point and is removed The favorite newspaper item is that it entered a finger of one hand and came out of one of the fingers of the other When a really talented correspondent reports the story the needle always comes out of the finger corresponding to the one which it entered on the other side Occasionally, as was recently the case in the *New York Herald,* a correspondent suggests that such migrations deserve careful study, because they may point to some law of circulation within the tissues as yet imperfectly understood or perhaps not even guessed at in present-day medicine

A story that recently went the rounds was a variant on the old-time needle migration, because the traveling object was that interesting element of romantic detail—a serpent's fang This, after having supposedly entered into the thumb of the right hand, came out on the left Unfortunately for the most sensational part of the story the actual details showed that a portion of the fang had entered one thumb some years ago, and, its presence having been unsuspected and having created no reaction—it was the fang of a non-poisonous serpent—gradually worked its way to the surface of the same thumb, producing a small inflammatory area in the process, and found its way out

Of course newspapers will continue to print such stories because it is copy that certain readers feast on with avidity In the meantime it would be well to know from a scientific standpoint just how far the migration of small sharp objects is possible Such cases as present the phenomena of migration should be reported with care The accounts of ignorant patients can not be depended on Occasionally, when needles have appeared in the abdominal wall there is no doubt that they have been swallowed, though sometimes such appearances are accounted for on the supposition that a needle may have found its way beneath the skin of the hand or the foot Although there is no definite memory of such an occurrence at first, after the person has thought over the matter for some time, some incident is remembered that seems to suggest that such an incident may have occurred Here is a chance for studies in suggestion and psychology as well as in surgery and physiology, but the subject deserves more accurate attention than has hitherto been given it

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[1] Jour de Physiol et de Path gen 1906, vol viii, p 653 See abstracts in The Journal, page 1420

THE NEGRO BRAIN

There is little doubt that the race feeling which is present in those states which contain a large negro population is due to the fundamental differences of a psychologic and temperamental character between the two peoples It is interesting, therefore, to find in Bean's[1] recent paper the evidence that there are anatomic differences in the brain of the negro which distinguish it from the brain of the Caucasian, and which doubtless account for the differences in mental character which distinguish the two races The negro brain is smaller than the brain of the Caucasian, especially so far as the frontal lobes are concerned and the areas having to do with the association of this part of the brain with other regions From what we know of the functions of the frontal lobes, and of the mental differences between the races, Bean concludes that the lower mental faculties of the negro, such as smell, sight, handicraftmanship, body-sense and melody, are well developed, but in the higher faculties, self-control, will power, ethical and esthetic senses and reason the negro falls considerably behind the Caucasian

FLAT RESIDENCE AND INSANITY

An official of the state board of charities of one of our larger states is credited with the assertion that a large proportion of the insanity in women in cities is due to living in flats and that the isolation and monotony of such a method of existence is the cause Hitherto, he says, the monotony of farm life has been regarded as a principal cause of female insanity, but now the city flats are running the farm a close second While it is probable that the effects of farm life have been over-rated and that it is likely that those of flat buildings may possibly be subject to the same charge, it can not be denied that there is a possibility of evil in the great extension of the flat system of dwellings so far as the mental as well as the physical health of the community is concerned The congregation of individuals and families in flats does not tend apparently to a greater community of interest or to social intercourse Even in the better class of tenements there are disadvantages in the lack of interest and occupation as compared with housekeeping under other conditions, and, owing to the exigencies of city building space and the greed of landlords, many of the even moderately expensive flats are anything but sanitary on account of the lack of light and ventilation Living rooms in which the sun can never enter directly, or at best for only a brief portion of the day, are not only unhealthy, but are mentally depressing, and it need not be thought surprising that some women with melancholic dispositions should suffer from such environment With the poorer class of tenements all evils are likely to be exaggerated The fact is, however, that the greater portion of the insanity is already coming from the cities, and the flat is only one of the contributing factors among all the others incident to the overcrowding of population The prospect is that matters are liable to be worse before they are better if the present tendency of crowding into apartments continues

IODOPHILIA

We have previously commented on the iodin reaction of the leucocytes, the so-called iodophilia, and have called attention to the value of the test in clinical medicine, a value especially emphasized by the work of Cabot and Locke in this country In all new tests the danger is to overestimate rather than to underestimate the value of the procedure, and it is well to take stock of a new test or a new discovery after it has had two or three years of use at the hands of competent and unprejudiced observers A recent paper by Bernicot[1] suggests that we shall have to modify our estimate of the usefulness of the test for iodophilia Bernicot's paper brings out the fact, soon discovered by those who used the test, that a good deal of experience is needed to interpret the findings He emphasizes also the lack of relation between the presence of iodophilia and the degree of leucocytosis, but thinks that the degree of iodophilia and the degree of toxemia run fairly parallel He believes that the reaction is evidence of toxemia, whether bacterial or otherwise, and that it is so inconstant and variable that it is unworthy of use as a routine procedure There are two conditions, however, according to Bernicot, in which the iodin reaction is of great value lobar pneumonia, in which its persistence after the crisis signifies complication or delayed resolution, and suspected abscess, in which its absence is of great negative value

SERA FOR SNAKE BITES

Compared to India, or even to Australia, the United States does not lose many inhabitants from the bites of poisonous snakes And yet those who con the daily papers know that especially in the South and West, a year never passes without a number of fatalities from this cause A little over ten years ago Calmette announced that he had discovered an antitoxin which would protect against all varieties of snake bite, and even against scorpion bites, and was, moreover, curative The vast mass of work on immunity and allied problems done since this announcement has made increasingly clear that antisera, like toxins, usually have a marked degree of specificity Calmette's conclusions have been shown to be erroneous, and his serum has been demonstrated to be of value only in cobra poisoning In practically all snake poisons there are at least two kinds of toxin, one acting on the central nervous system, the other producing a local hemolytic and necrosing action In some snakes, the cobra, for instance, the nerve poison is greatly predominant in the venom, in others, like the rattlesnake, the hemolytic and necrosing substance is in the ascendant. The difficulty in producing a serum antagonistic to the venom of the rattlesnake has been due to the fact that the intense local effects of the poison had to be overcome, while at the same time the toxin must not be so injured that its power of producing antibodies was lost This was accomplished by Noguchi[1] some time ago, and he has recently published a further study in which he shows that the poison of the rattlesnake has a high degree of specificity and that rattlesnake bites must be treated by a specially prepared serum The point of practical interest in connection with this paper is the high degree of therapeutic efficiency possessed by the anticrotalus serum Animals which had been poisoned with virulent snake poison could be rescued almost up to the time they became moribund by its administration There seems good reason to believe that an anticrotalus serum of sufficient therapeutic power to be of service in cases of rattlesnake bite in man can be prepared, but whether its use would be sufficiently extensive to make its manufacture a commercial success is another matter Whether it is prepared or not will probably depend on this last factor

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[1] Amer Jour of Anatomy 1906 vol v p 353

[1] Jour of Pathology and Bacteriology 1906 xi 304

Medical News

ILLINOIS

Personal.—Dr John C O'Connor and family Buffalo have returned from Pueblo, Colo ——Dr Frank E Baldwin, Peoria, who is suffering from septicemia is improving

Addition to Hospital.—A 12 room addition to the main building of Beverly Farms, Godfrey, has just been completed and furnished, and the new school and gymnasium building is also open for continuous service Dr W H C Smith is superintendent of the institution

Burning Leaves—Dr James A Egan, secretary of the State Board of Health, declares that there should be an ordinance against the burning of leaves at night, or in the evening as the smoke irritates the throat and leaves it susceptible to the lodgment of germs of diphtheria and other diseases

Typhoid Fever at Mont Clare.—Typhoid fever is reported to be raging at Mont Clare and the surrounding territory, on the northwestern border of Chicago Officials of the health department report that the outbreak is due to an impure milk supplied by one dealer Twenty cases are reported in the village

Quarantine Enforced—Stringent action is being taken by the State Board of Health compelling the observance of rules of quarantine in the village of East Springfield where several cases of diphtheria have developed Under the direction of the village board, an armed guard is maintaining quarantine ——The Stuart School, Springfield, which has been closed on account of diphtheria, was reopened November 5

Chicago

Gas Kills Hospital Employés—Two employés of the German Hospital were asphyxiated by gas and two others were overcome in the room in which all four slept at that institution, November 8

Donation to Institute—The Pasteur Institute, Paris, has donated to the Turck Institute a complete collection of all micro organisms known to infest the gastrointestinal tract of man This collection includes specimens obtained from all parts of the world.

Diphtheria.—Diphtheria continues to spread and the mortality is higher than in any October or November for four years The chief medical inspector attributes this increase to the absence of school inspection, and is making every effort to have this service resumed.

Cocain Seller Arrested.—George Styer, a druggist on West Randolph Street, is reported to have been arrested, November 8, on the charge of selling cocain to Walter Butler He was arraigned before Justice Schott on the charge of disorderly conduct, and is reported to have admitted selling the drug

Examination.—An examination will be held at St Joseph's Hospital, Joliet, December 12, at 2 p m, for interne Any reputable physician, a graduate of a medical college, is eligible for the appointment. Those wishing to take the examination should address the Sister Superior, St. Joseph's Hospital, Joliet

Typhoid Fever Prevalent—The health department reports that typhoid fever is more widely spread throughout the country than at any time since 1902 It is especially prevalent in localities dependent for their water supply on shallow wells and streams, which, on account of the phenomenally dry weather have become polluted

Personal—Dr D'Orsay Hecht has been elected assistant professor of nervous and mental diseases and medical jurisprudence in the Northwestern University Medical School ——Dr Edson B Fowler has returned after a year in Europe —— Dr H R. Pitz has been added to the staff of the Michigan Asylum for the Insane, Kalamazoo

Deaths of the Week.—For the week ended November 10, 514 deaths were reported from all causes, equivalent to an annual death rate of 13 08 per 1,000 Pneumonia caused 68 deaths, consumption, 66, violence (including suicide), 38; heart diseases 36, nephritis, 35, acute intestinal diseases, 34, nervous diseases, 24, and cancer, 22

Tillman to Aid Charity—On November 27 Senator Tillman of South Carolina will lecture in Orchestra Hall for the benefit of the equipment fund of the new Chicago Union Hospital, on the subject, "Shall the United States Annex Cuba?" The new hospital is a five story brick structure, and is now nearing completion at a cost of about $60,000

Lot Deeded to Hospital.—A deed has been placed on record whereby Otto Young transfers to Dr Frank Billings the property at the *northwest corner* of South Park Avenue and Sixty fourth Street, a site selected more than a year ago for the McCormick Memorial Institute for Infectious Diseases, but which was made unavailable for that purpose by the action of the city council at that time

INDIANA.

Acquitted—In the case of the board of health of Madison against Dr Nathan P Graham, charged with failure to report a *case of smallpox* the mayor declared the charge against Dr Graham not sustained

Personal.—The State Board of Health has accepted the resignation of Dr Thomas V Keene Indianapolis, its pathologist ——Dr James R. MacCracken, Garrett will leave for Pueblo in a few days on account of his health ——At the annual election of the Fort Wayne Academy of Medicine November 3 Dr Garrett von Swerngen was elected president, Dr Charles Beall vice president Dr Louis F Brown, secretary and Dr Adam L. Schneider treasurer

District Society Meeting—At the semi annual meeting of the Ninth Councilor District Medical Society held November 8 at Lafayette about 80 physicians were present The president Dr Charles Chittick Frankfort presided Dr William S Walker Lafayette delivered the address of welcome An amendment of the by laws providing that the annual meeting should be held in October was carried, and an amendment was also passed that each society in the district should be represented by one member and one alternate. Dr George F Keiper, Lafayette, read a letter from the governor, showing his approval of the movement for the establishment of a state sanatorium for tuberculosis After the reading of papers the physicians were entertained at dinner at Lafayette Club by the Tippecanoe County Medical Society Dr George F Beasley, Lafayette, acted as toastmaster

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[1] Jour of Exp Med. 1906 vol viii p 614

MARYLAND

Cornerstone Laid—The cornerstone of the north wing of the Frederick City Hospital, donated by Mrs Margaret E S Hood, was laid with appropriate ceremonies November 2

Schools Closed.—The trustees of the public schools of Hyattsville, Marlboro and Berwyn, Prince George County, have closed the institutions temporarily on account of the prevalence of diphtheria.

Emergency Hospital Closed.—The Emergency Hospital of Frederick, which has been in operation for the last three years, has been closed by action of the Frederick County Medical Society, which established the hospital The institution is entirely solvent, but owing to lack of adequate state and other support, it is deemed best to close it

Vaccine Physicians Named.—The county commissioners of Cecil County have appointed the following vaccine physicians Drs Edwin N Crawford, Ceciltown, J J Wright, Warwick, William C Karsner and Thomas J Conrey, Chesapeake City, John H Jamer and William T Morrison, Elkton, Camillus P Carrico, Cherry Hill, Philip B Housekeeper, North East, L George Taylor, Perryville, Harry E. Clemson and S Groome Fisher, Port Deposit, George S Dare and John B Slicer, Rising Sun, Samuel T Roman, Conowingo, Ernest Roland, Liberty Grove, David T Gifford, Zion, and Davis H Richardson, Calvert

Baltimore

Personal.—Dr Francis J Kirby, who has been seriously ill at the St Joseph's Hospital, is reported to be convalescent——Dr William H Smith is in Paris——Dr Robert E L Campbell, who has been spending two years in Europe and the East, has returned to Baltimore

Service for Medical Men—The second annual service for physicians, medical students and nurses, modeled after that held in St Paul's Cathedral, London, was held in Grace Church, November 4 The service was conducted by the bishop of Delaware and the offertory was for the Hospital for Consumptives of Maryland.

Examination of School Children—Medical examiners of public schools report that they examined 11,293 children in October, of whom 3,651 were suffering from slight ailments of the eye, ear, nose, throat, skin or nervous system All but 236 of the children had been vaccinated and only 62 were obliged to be removed from school for treatment.

Bequest to Hospital—The Maryland University Hospital has been named in the will of the late J G Harvey for a large residuary bequest The value of the estate is estimated at from half a million to a million dollars and is left in trust The income on it is to be paid to an only son, and at his death the estate is to be equally divided between the University Hospital, Union Protestant Infirmary and the Hospital for Consumptives

University of Maryland Centennial.—The dates of holding the University of Maryland centennials have been definitely fixed at a meeting of the committee of regents, faculties and alumni, held last week. The ceremonies will commence May 3 with a general home coming and alumni day There will be a reception at the University Hospital, followed by private receptions and society and class reunions in the evening The buildings will be decorated, illuminated and will be open for inspection May 31 will be University Day, when joint commencement exercises of the various schools will be held, with the conferring of honorary degrees, followed in the evening by a banquet. June 1 will be students' day, devoted to athletics, excursions, torchlight procession, students' banquet, etc June 2, Sunday, will be celebrated by religious ceremonies and commencement exercises Dr John C Hemmeter is chairman of the joint committees

MASSACHUSETTS

School Closed.—The Malden school board has closed the Coverly school on account of the prevalence of diphtheria.

Personal.—Dr A. F Downing, Cambridge, has been appointed physical inspector by the State Civil Service Commission.——Dr Arthur V Goss has been elected superintendent of the Taunton Insane Hospital, vice Dr John P Brown, resigned——Dr Fred M Stiles, Waltham, was recently injured in a collision between automobiles

Red Cross Election.—The Massachusetts Red Cross Society elected the following medical men on its board of officers for the ensuing year Vice presidents, Drs Henry P Walcott, Arthur T Cabot and Herbert J Burrell, executive committee, Dr Edward H Bradford, and advisory committee, Drs Homer Gage, James T Adams and David Cheever During the past year $89,250 was collected by this branch of the association.

Harvard Scholarships.—The faculty of the Harvard University Medical School has awarded the scholarships for the year 1906 1907 as follows The Claudius M. Jones scholarship of $250 to F O West, two Hilton scholarships of $225 each to M J Shaunessey and H. V Hendricks, the Charles E Porter scholarship of $225 to A A. Howard, the Edward M Berringer scholarship of $200 to C A McDonald, the Alfred H. Sinder scholarship of $200 to W J C Sharpe, the Edward Wigglesworth scholarship of $200 to H Morrison, the John T Taylor scholarship of $200 to H. S Bernstein, the Lucius F Billings scholarship of $200 to E D Bond, two Eveleth scholarships of $200 each to R. C Hunt and J E Overlander, the two halves of $100 each of an anonymous gift to H. H. Smith and M H. Neill, the Orlando W Don scholarship of $100 to J P Leake, the Charles P Strong scholarship of $100 to C W Waddell, two thirds of the John Foster fund, amounting to $100, to E T Congdon, and the Cotting gift of $125 to A T Grant

Tuberculosis Society Meets—The annual meeting of the Boston Association for the Relief and Control of Tuberculosis called attention to the fact that 4 702 persons died of this disease in the state in 1905, and that about 9 per cent. of all the deaths were from this cause The association has been active this year in promoting the new hospital for Boston which is to be built at Mattapan, the development of the day camp on Parker Hill, the tuberculosis classes for home treatment, of which there are now three, the care of these patients by the Instructive District Nursing Association, and the "social service department," which has been started in connection with the out patient department of the Massachusetts General Hospital The receipts during the past year were $13,138 Dr Edward O Otis is president, Dr Arthur K. Stone, vice president, and the following physicians are on the council Drs George S. C Badger, John G Blake, Vincent Y Bowditch, Arthur T Cabot, Herbert C Clapp, William T Councilman, Samuel H Dargin, Harold C Ernst, George W Fitz, Reginald H Fitz, Elliott P Joslin, Frederick I. Knight, James J Minot, Joseph H Pratt, Charles P Putnam, George H M Rowe, Frederick C Shattuck and Henry P Walcott

NEW JERSEY

Personal.—Dr Waldo F Sawyer was elected mayor of Vineland, November 6——Dr Eugene J Asnis has been appointed a member of the Woodbine board of education——Dr Leslie L Hand, Millville, has been appointed pastor of the Newfield Methodist Episcopal Church

Bacteriologic Laboratory Report.—The report of the state bacteriologic laboratory of the Bureau of Health for the month of October shows that 751 specimens were examined for special diagnosis, as follows From suspected cases of diphtheria, 334 cultures, tuberculosis sputum, 245 specimens, 154 Widal examinations were made, and 11 examinations of blood for the malarial parasité, 7 miscellaneous examinations were made.

Free Dispensary Opened.—A new dispensary for the free treatment of the poor of Newark was opened November 1 It is known as the Newark Polyclinic and is under the charge of the following staff Drs Siegfried Husserl, S H Gordon, Carl F W Lippe, E Reissman, William D Bleick, Theodore E. Bleick, Charles A. Rosenwasser and others The dispensary is open to the public every afternoon and evening except Sundays and holidays

Contract Medical Practice—The Orange Practitioners' Society at its last meeting adopted the following resolution in regard to the practice of contract medicine. The resolution was incorporated as a by law of the society

> *Resolved* That no member of this society shall accept or maintain the position of club society, or organization physician or do, or agree to do any medical or surgical work for any club, society or organization at a less rate than the regular customary charges for like service rendered by other physicians for patients not members of such club society or organization Also, that in no case shall any physician agree to attend the families of the members of such club society or organization at half price, or less price than the usual rate.
>
> Nothing in this resolution shall be construed as preventing any member from attending the worthy poor at a less rate, or from giving free service to those who are too poor to pay anything or

from acting as city, county or town physician or health officer, or from serving under any political appointments

Any violation of this by law shall be considered unprofessional conduct, and shall render the member guilty thereof liable to suspension or expulsion from this society as the society may determine.

Society Meetings—At the annual meting of the East Monmouth Practitioners' Society, at Long Branch, Dr Harry E Shaw was elected president, Dr James J Reed, vice president, Dr Harry B Slocum, secretary, and Dr William K. Campbell, treasurer——At the eighth annual meeting of the Tri County Medical Society of Sussex, Morris, and Warren counties, which was held in Newton, October 10, the following officers were elected President, Dr Alfred A. Lewis, Morristown, vice presidents, Drs Alvah C Van Syckle, Hackettstown, and Jackson B Pellett, Hamburg, and treasurer, Dr Frederick W Flagge, Rockaway——At the thirteenth annual meeting and dinner of the Clinical Society of the Elizabeth General Hospital, held October 16, Dr Steven J Keefe, Elizabeth, was elected president, Dr James L. Perkins, Cranford, vice president, Dr Russell A Shirrefs, Elizabeth, secretary, and Dr Frederick H Pierson, Elizabeth, treasurer

State Health Report—The number of deaths reported to the Bureau of Vital Statistics for October was 2,519, a decrease of 216 from the previous month and 719 less than during the month of August By ages there were 631 deaths among infants under one year, 254 deaths of children over one year and under five years, and 600 deaths of persons aged 60 years and over The number of deaths from infantile diarrhea is diminishing, the mortality from this cause for October (237) being only 45 per cent of that for September (520) Pulmonary tuberculosis continues to maintain a high death rate (257), but a falling off is shown in the figures for pneumonia (100) The number of deaths from the group of affections classified as "diseases of the nervous system" (313) is 63 less than the average for the months of July and August The usual annual increase in the deaths from typhoid fever has not yet appeared in the records, and the figures for July (24), August (28), September (29) and October (27) vary but little Scarlet fever caused only 3 deaths, and only 2 were caused by measles, but the mortality from whooping cough was 42

NEW YORK.

New York City

Conditional Gift—John D Rockefeller has pledged $20,000 toward a new hospital at Tarrytown, provided $75,000 is raised by May 1

Milk Dealers Again Fined.—Judge Zeller has placed the penalty for selling adulterated milk at $100 and $75 in two cases, and smaller fines were imposed in many other instances

Many Accidents—St. Gregory's Free Hospital, Gold Street, has the record number of accidents For the week ended October 20 this hospital reported 1,330 cases of emergency surgical operations and dressings

Personal.—Dr George Franklin Shiels has received from the War Department a medal for bravery on the battlefield during the Philippine insurrection——Dr Francis H Markoe arrived from Europe on the *Kaiserin Auguste Victoria*

Bellevue Charges Dismissed—At the meeting of the trustees of Bellevue and the Allied Hospitals it was decided to take no action on the charges against Dr Armstrong which have been preferred by the 51 members of the hospital staff

New Hospital on Fire—The dormitory of the new branch of the Metropolitan Hospital, Blackwell's Island, caught fire recently Fortunately, the building was still unoccupied and the fire was extinguished before much damage was done

Hospital Staff Resigns.—The six doctors on the house staff of the German Hospital, in Brooklyn have sent in their resignations on account of trouble with the head nurse The trustees support the nurse and have accepted the resignations of the staff

Ambulance Accident.—A Lebanon Hospital ambulance was struck by a car at One Hundred and Fifty eighth Street and Third Avenue and all of the occupants received injuries The motorman was arrested and held in $1,000 bail on the charge of assault

Bequests to Hospitals—Mrs C H Polhemus has bequeathed $300 000 to the Polhemus Memorial Clinic of Brooklyn and smaller sums to other hospitals and asylums——One forty eighth of the estate of the late Edwin Stone, which is valued at $200 000, is to go to the Seaside Hospital

Hospital Anniversary—The twenty fifth anniversary of the Brooklyn Home for Consumptives has just been celebrated A handsome loving cup was presented to Mrs S V White, the president of the home During the existence of this institution 5,483 patients have been cared for in the home, and 3,423 were cured or benefited

Professions Unite in Society—At a meeting of the Tri Professional Society, composed of physicians, dentists and pharmacists of New York City, the following officers were elected: President, Dr Samuel S Wallian, vice-presidents, Dr J Monroe Lieberman, and E H Felix Pirkner, secretary, Dr J Carlisle De Vries, and treasurer, Dr Eugene R Eliscu

Bequest—Among the numerous charitable bequests of the late Mrs Mary L Cassilly is one of stock worth $153,575 to the New York Society for the Relief of the Ruptured and Crippled After other bequests to relatives and to other charities the residuary estate of several hundred thousand dollars is to be divided equally among the Society of the Lying in Hospital, the Home for Incurables and the Society for the Relief of the Ruptured and Crippled

Contagious Diseases—There were reported to the sanitary bureau for the week ended November 3, 387 cases of tuberculosis, with 176 deaths, 239 cases of diphtheria, with 25 deaths, 99 cases of typhoid fever, with 24 deaths, 73 cases of scarlet fever, with 5 deaths, 64 cases of measles, with 3 deaths, 41 cases of whooping cough, with 5 deaths, 6 cases of cerebro spinal meningitis, with 11 deaths, and 48 cases of varicella, a total of 957 cases and 249 deaths

NORTH CAROLINA

Physicians as Candidates.—It is reported that 14 of the legislative candidates in North Carolina are practitioners of medicine

Portrait Presented.—The Capitol Club, Raleigh has recently placed on its walls a life size portrait of Dr James McKee superintendent of the State Hospital at Raleigh, and for 20 years president of the club

Physicians Robbed.—The home of Dr George L Wimberly, Rocky Mount, was entered by burglars October 27 and a considerable amount of silver and other valuables stolen——A sneak thief entered the home of Dr William H H Cobb, Goldsboro, October 25, and stole $45

Judgment Affirmed—The Supreme Court has handed down a final opinion in the case of Dr Joseph B Matthews, Greensboro, who was convicted of killing his wife and sentenced to 20 years' penal servitude The judgment of the lower court is affirmed It is since reported that Dr Matthews has committed suicide

Charter Amendment.—The charter of the North Carolina Medical College has been so modified as to permit the conduct, by the corporation, of two schools, one for freshmen and sophomores, at Davidson, and one for the junior and senior classes at Charlotte It provides also that both schools may be united at Charlotte The capital added to the institution is $30,000

Personal.—Dr Henry H Harris, Wake Forest, is critically ill at his home in that place——Dr P L. Murphy, superintendent of the State Hospital at Morganton, and Dr Isaac Y Faisan, dean of the North Carolina Medical College, Charlotte, have recently undergone operations for gallstones in Baltimore——Drs S Westray Battle, Asheville, and Edward C Register, Charlotte, have returned from New York——Dr William S Anderson, Wilson, sustained painful injuries in a head end automobile collision, October 27——Dr Lewis M Gaines, Wake Forest, is seriously ill with typhoid fever

PENNSYLVANIA

Staff Physicians.—At a special meeting of the board of managers of the Chester Hospital, the following attending staff was named Drs Jonathan L. Forwood Samuel R Crothers L Haines, Leon Gottschalk, Daniel W Jefferis, Ellen F Brown, Katherine W Ulrich, Edward W Bing Frederick H Evans, William F Lehman and D Forest Harbridge

Personal.—Dr W W Richardson, newly elected physician of the men's department of the State Hospital for the Insane Norristown, assumed his duties November 15——Dr Thomas C Rutter, Hazelton, is seriously ill at his home——Dr Katrina Freudenberger, Tamaqua, was thrown from her carriage November 5 and sustained a fracture of the left arm and painful contusions

New State Laboratories Opened—In a letter addressed to physicians throughout the state, Dr Samuel G Dixon, state commissioner of health, announces the opening of the new laboratories of the Department of Health located in the University of Pennsylvania, Philadelphia, November 3 The opening of these laboratories ranks in importance with the establishment by the commissioner nearly a [illegible] ago of [illegible] for the free distribution of diphtheria antitoxin to the poor throughout the state The letter issued to the profession calls attention to the operation of the laboratory and to the facilities offered by the institution In an accompanying pamphlet the scope of the work is set forth The department also issues a concise pamphlet of instructions for the regulation of quarantine, isolation and disinfection in the several communicable diseases

Philadelphia.

Pleased with Hospital Site—The finance committee of city councils has recommended that the councils make an appropriation of $261,000 for the purchase of 870 acres of farm land in Byberry as a site for the new Insane Hospital and Home for the Indigent

Hospital Donation Days—At the annual donation day of the Children's Hospital $1,500 in gifts and money were received ——St Luke's Hospital will hold its annual donation day December 1, the Germantown Hospital, November 22, and the Samaritan Hospital, December 1

Medical Society Anniversary—The Northern Medical Association of Philadelphia, next to the College of Physicians the oldest medical society of the city, will celebrate its sixtieth anniversary by the publication of the history of the association and by a special festival and banquet on December 5 Present and former members and other friends are cordially invited to participate.

New Contagious Hospital Plans—Plans have been completed for the buildings which will comprise the administration, store, public and private wards, nurses' home, refectory, receiving and observation wards for the treatment of scarlet fever The sum of $891,500 is available from the $16,000,000 loan for the purpose The buildings will be arranged on the group plan, connected by open corridors

Hospital Society Meets—Fourteen hospitals were represented at the annual meeting of the Hospital Association of Philadelphia, November 2 The following officers were elected President, John C Brown, Episcopal, vice president, Ellison T Morris, Germantown Hospital, secretary and treasurer, Robert E Hastings, University Hospital The Hospital for the Diseases of the Stomach was admitted to membership

Carnegie Donation for College of Physicians—At the meeting of the Philadelphia County Medical Society November 7, Dr S Weir Mitchell announced that Andrew Carnegie will give the College of Physicians $50,000 contingent on the college raising the sum of $100,000 The money is to be used in the erection of a new college home This is the second donation of $50,000 that Mr Carnegie has made to the institution It is said that the new home of the College of Physicians as now proposed will cost about $200,000

Health Report—The total number of deaths reported for the week ended November 9 was 474 This is an increase of 38 over the number reported in the preceding week and an increase of 36 over the number reported in the corresponding week of 1905 The principal causes of death were as follows Typhoid fever, 15, measles, 4, pertussis, 3, diphtheria, 18, consumption, 56, cancer, 15, apoplexy, 17, heart disease, 58, acute respiratory disease, 63, enteritis, 28, apendicitis, 4, Bright's disease, 33, suicide, 8, accidents, 17, and marasmus, 2 There were 236 cases of contagious disease, with 35 deaths, as compared with 201 cases and 19 deaths the previous week.

Bequests—By the will of the late Hannah C Ralston, the residence at 914 Clinton Street is given to the Pennsylvania Hospital, to be used for the establishment of free beds in the hospital for poor children ——The will of the late Judith L. Freche directs that his estate, valued at $150 000, shall be placed in trust, the income to be paid to his widow during her life At her death the will directs the following bequests to be made To the Jewish Hospital Association, $5,000, Jewish Maternity Association, $2,000, Jewish Emigration Society, $2,000 ——By the will of the late Sarah Lewis the Children's Hospital will receive $2 000 ——By the will of the late Samuel W Goodman a contingent bequest of $2,000 is made to the Jewish Hospital Association, $1,000 to the Jewish Foster Home and Orphan Asylum, and $300 to the Jewish Maternity Hospital

VERMONT

Pardoned.—Dr W R. Harkness, Montpelier, convicted of forgery in 1903, and sentenced to six years' imprisonment, has been pardoned by the governor after serving a little more than three years of his sentence

Typhoid Prevalent.—Typhoid fever is reported to be prevalent in many places in the state Rutland is reported to have 8 cases and Cuttingsville 7 The State Board of Health has forbidden the use of unboiled lake water in all towns situated on Lake Champlain.

Commission Asks Abolition.—The state tuberculosis commission has decided that its duties can be performed efficiently and conveniently by the State Board of Health and recommends in its report the abolition of the commission, that the work be transferred to the State Board of Health, and that a bill be passed by the legislature to appropriate $2,000 for this purpose *The State Board of Health will urge the legislature* to retain the tuberculosis commission and not to turn its work over to the board

Personal.—Dr Joseph T Peladeau has been elected health officer of Swanton, vice Dr Frank H. Dunbar, deceased ——Dr Samuel E Maynard, Burlington, has been elected adjunct professor of gynecology, Drs Aymer S C Hill, Winooski, and G E La Tour, Burlington, have been appointed clinical assistants in gynecology, Dr Bingham H Stone has been made adjunct professor of bacteriology, and Dr Watson L. Wasson, Waterbury, professor of mental diseases, in the University of Vermont, Medical Department

VIRGINIA.

Schools Reopen.—The schools of Onancock, closed for two weeks on account of diphtheria, reopened October 17

Officers Elected—At a recent meeting of the Newport News Medical Society, Dr Thomas J Sims was elected president, Dr Clarence L Jones, vice president, and Dr Anna Moon Randolph, secretary treasurer

Health Ordinance Approved.—An ordinance creating a health department of Norfolk was passed on the first reading by the common council October 19 The department, as planned, will cost the city $1,900 more per annum than the old department, and by it the following officers are provided Health commissioner, four assistants, an inspector of foods and milk, five sanitary inspectors and two apothecaries

Personal—Dr A P Bonahan has been appointed resident physician of the Newport News City Hospital ——Dr T M Marcellus, Charlottesville, who has been seriously ill at the Jefferson Hospital, Philadelphia, is reported to be improving ——Drs Joseph M Burke, Petersburg, and William L. Harris, Norfolk, have been appointed members of the board of visitors of the Medical College of Virginia, Richmond

Health Officers' Conference—At the Conference of Health Officers of Virginia, held October 10, resolutions were adopted setting forth the necessity of requiring registration of vital statistics and the coöperation of the various states in establishing registration, and recommending to the legislature of Virginia that a law be enacted for a thorough and complete registration of vital statistics throughout the state, by means of standard certificates as recommended by the United States Census Bureau and the American Public Health Association, and that burial or removal permits be required for the removal or burial of the dead

GENERAL

Hospital Opposes Removal of Cuban Lepers.—Cable reports state that San Lazaro Hospital, Cuba, in which there are several hundred lepers, probably will be removed to an island off the northern coast of Matanzas province The removal of this hospital has long been desired, but the project has been opposed, it is stated, by the wealthy private corporation by which it is controlled

Yellow Fever in Cuba.—Cases of yellow fever are still being reported from Havana, Cruces and other parts of Cuba By telegraph we learn that on November 12 there were 7 cases in Havana and 3 in Santa Clara province In *Public Health Reports*, Minister Morgan at Havana gives details of the precautions ordered taken by Charles E Magoon, provisional governor *to prevent the spread of the disease*

> The municipal districts of the following towns Cruces Ranchuelo Palmira, and Lajas are considered as the infected zone
>
> Chief inspectors will direct work at each town
>
> In each town adequate screened rooms will be prepared for the isolation of patients and suspects
>
> The passenger trains running between Cruces and the other three towns will carry physicians who will make inspections *en route*
>
> The local physicians appointed will keep a record of the morning and evening temperatures of the non immune persons within the infected zone
>
> *At a detention camp near Cruces non immunes will be watched for five days before leaving the infected zone.*
>
> Brigades will be established for extirpation of mosquitoes and disinfection of dwellings.

Historical Laryngologic Exhibition.—Prof Bernhard Fraenkel of Berlin Germany, reached the age of 70 years November 17 Numerous proposals to celebrate the event by a banquet and by a special celebration by the Berlin Laryngological Society, of which he is the president were respectfully declined by him. His assistants, Prof. Edmund Meyer, Dr. Arthur Alexander, Dr. George Finder and Dr. Börger, have arranged an exhibition in honor of the event illustrative of the progress of laryngology in the past 50 years. It will be held in the Kaiserin Friedrich Haus in the Louisen Strasse in Berlin, November 17 to 30, and this, because of its value historically, the professor has accepted. In order that this exhibit might be complete, the coöperation of laryngologists throughout the civilized world was sought in the early spring of this year. At the regular meetings of the various national associations of American laryngologists it was voted to participate, and their interests were placed in the hands of Dr. Emil Mayer of New York City. As a result of the hearty coöperation, over 1,000 instruments, appliances, models used in teaching, etc., each bearing a distinctive tag with the word America stamped across the face, were sent, and the best represented country, aside from Germany, in this exhibit will be our own. Letters and cablegrams from all over the world were sent congratulating the professor, who is well known as the dean of laryngologists, for many years the head of the department of laryngology in the University of Berlin, and for 19 years, since its establishment, the editor of the *Archiv für Laryngologie*.

CANADA.

Prevalence of Smallpox.—There are 75 cases of smallpox in Moncton County and vicinity, New Brunswick.

University News.—The work of raising a $500,000 endowment fund for Queen's University, Kingston, is proceeding apace, $250,000 having been promised.——McGill Union is the name of a new society being formed at McGill. This society promises to be the most influential of all the student societies of McGill.——The students in the various faculties of McGill University are organizing a brass band.

Inspection of Schools in Montreal.—Dr. J. E. Laberge, Montreal's chief medical school inspector, reports that out of 43,241 children inspected at various schools, 20,022 were found suffering from some affection more or less necessitating medical treatment. The five chief items are as follows: Inflammation of glands, 1,699, defects of vision, 1,022, decayed teeth, 9,393, enlarged tonsils, 2,107, pediculi, 1,091.

Hospital News.—The directors of the General Hospital, Regina, Sask., are asking the council of that city to establish a $100,000 municipal hospital.——During October 249 patients were admitted into the wards of the Montreal General Hospital, 235 were discharged, and 16 died. The outdoor consultations numbered 3,877.——The annual report of the Toronto Home for Incurables states that during the past official year the institution cared for 171 patients, 40 patients were admitted and 28 deaths occurred. The institution now contains 139 patients.

Personal.—Dr. J. P. Pennyfather, Holland, Man., is establishing the Spruce Hills Sanatorium for Consumptives in the Spruce Hills district of that province.——Dr. Walter Bingham Kendall, Toronto, has succeeded in his examinations at Edinburgh and will take up postgraduate work at London and Dublin.——Dr. John MacCrae, Montreal, has passed the examinations for the degree of M.R.C.P., London.——Dr. Fred. J. Hart, Barrie, Ont., has gone to Winnipeg to practice.——Dr. A. D. McIntyre, Petrolia, Ont., has been appointed medical superintendent of the Kingston General Hospital.——Dr. Frank Allin, Parkhill, is going to China as a medical missionary.——Dr. C. O. Fairbank, Petrolia, Ont., will spend the winter at Santa Barbara, Cal.

How Canada Is Fighting Tuberculosis.—So far as sanatoria are concerned this is what Canada is doing in the way of combating the great white plague: Muskoka Cottage Sanatorium, Gravenhurst, 85 beds, Muskoka Free Hospital for Consumptives, Gravenhurst, 60 to 70 beds (both for incipient cases). Mountain Sanatorium, Hamilton, Ont., 20 beds, Toronto Free Hospital for Consumptives, Weston, 60 beds, advanced and far advanced cases, Galt (Ont.) Swiss Cottage Hospital for far advanced cases. Stratford, Ont., two tents for advanced cases, Lahl Ghur, Ste. Agathe des Monts, Que., for incipient cases, 21 beds, camp of Montreal League for Prevention of Tuberculosis for poor of Montreal. Provincial Sanatorium, Kentville, N. S., 20 beds for the residents of that province, Wolfville Highlands Sanatorium, Wolfville, N. S., 10 beds, private. Calgary Sanatorium, Calgary, Alta., 16 beds, private. British Columbia is endeavoring to establish a provincial sanatorium.

New Toronto Greek Letter Chapter.—Alpha Omega Alpha, a medical honor society, which elects a small number of students from those standing highest in scholarships in the fourth year class, granted a charter to students in the Medical Department of the University of Toronto, November 12. This is said to be the first college honor society to grant a charter outside of the boundaries of the United States, although one of them, the Phi Beta Kappa, has 63 chapters and has been in existence since 1776. Alpha Omega Alpha was established in 1902 and has chapters at the University of Illinois, University of Chicago, Northwestern University, Western Reserve University, Jefferson Medical College, University of Pennsylvania, Washington University, Harvard University, University of California, Johns Hopkins University and the University of Toronto. The official head of this order is Dean Winfield S. Hall of Northwestern University Medical School, Chicago, Dr. William W. Root, Parker, Ind., is secretary-treasurer.

FOREIGN

Prize for Cure of Sleeping Sickness.—Consul General Roosevelt of Brussels reports that the King of Belgium has offered a prize of $38,600 to any person of any nationality who shall discover a cure for sleeping sickness, and also an additional sum of $57,900 for the purpose of making researches and experiments toward exterminating this plague.

Koch's Research on Sleeping Sickness.—Koch writes from Sese, Bugala, in Africa, to the *Deutsche med. Wochschr.*, stating that his researches on sleeping sickness occupy his time so closely that he does not have even a quarter of an hour left for any other work. The party are in excellent health notwithstanding their incessant labors.

American Hospital in Turkey Burned.—The American Hospital and Training School for Nurses in Constantinople was burned to the ground on the eve of its formal opening. The loss is estimated at $10,000, which is only partly covered by insurance, but the board of directors proposes to rebuild at once, and steps have been taken to raise the necessary amount.

Prohibition of Yellow Phosphorus in Germany.—According to the resolutions adopted by the international conference to improve the conditions of wage earners, held at Berne last spring, Germany has forbidden the manufacture, importation and sale of matches made with yellow phosphorus, the law to go into effect Jan. 1, 1907. The restriction of the sale is given a year of further delay.

Goldberger Prize Goes to Obermayer and Pick.—The K. K. Medical Society of Vienna has the awarding of the Goldberger prize every three years. Only one article was received in competition for it this time, and the article did not meet the conditions. The prize was, therefore, given to F. Obermayer and E. P. Pick for their research in the last three years on the specific properties of the albumin compounds.

Organization of the Profession in Austria.—Last month witnessed the final organization of the physicians of Austria for concerted action. The secretary of the German *Leipziger Verband* attended the assembly of delegates and gave them the benefit of his experience in organizing the physicians of Germany. He urged the collection of a fund by imposing an annual fee of $5, as in Germany, but the Austrian association feared to dampen the ardor of the newly organized profession by exacting any contributions at present.

Trachoma in Italy.—The eighteenth Italian congress of ophthalmology was held at Rome in October, and resolutions were adopted urging the government to take measures to eradicate or at least prevent the spread of trachoma. It is extremely prevalent in Italy, and measures were advocated somewhat similar to those now in vogue for the prophylaxis of pellagra, tuberculosis and malaria. Compulsory declaration of all cases of trachoma, both by civilian and military doctors, a certificate declaring the individual free from trachoma to be required of graduates of the schools and of all applicants for public office, establishment of schools for children with trachoma to segregate them, and also free eye dispensaries where needed, and wards in the hospitals for patients with trachoma, establishment of postgraduate courses in treatment and prophylaxis of trachoma, and finally, if a separate school for children with trachoma is not practicable, their segregation in special rooms or parts of school rooms.

Measures to Improve the Lot of the Ship Doctor.—The *Leipziger Verband* of Germany has taken up the question of the standing and pay of medical officers on German ships and has announced its ultimatum to the various ship owners as follows: In regard to salary, the minimal monthly rate for oceanic voyages must be 175 marks the first year, 200 the second, and 250 the third (respectively about $44, $50 and $62.50). For coast trips to China, for instance, the minimal monthly rate must [illegible] for the first six months and 300 for the seco[illegible] and [illegible] In case the physician is a graduate of the Hamburg School for Tropical Diseases, these terms are to be increased by $6 25 and $7 50 The customary "wine allowance" of 2 marks or 50 cents a day is to be paid in cash The idea that a ship doctor should not retain his position for more than three years is discountenanced, and his salary should be increased with length of service He is entitled to demand payment according to accepted rates for medical attendance on first class cabin passengers The ship owners are not to advertise or proclaim in placards or otherwise that passengers on the ship are entitled to free medical attendance, as this is liable to lead to excessive demands for the services of the physician and also to detract from the dignity of his position He should rank as one of the upper officers although not wearing the insignia of his rank unless required to dress in uniform In case this is required, the price of the uniform is to be allowed by the ship owners Otherwise the ship doctor should add merely the velvet collar and Esculapius badge or the service cap The captain has no right to forbid the ship doctor from going ashore in a foreign harbor, but the physician must notify the captain or his representative when he leaves the ship, and he goes ashore entirely on his own responsibility The ship doctor is to be provided with a cabin suitable in location, size and furnishings for his position as one of the upper officers Another place must be provided elsewhere for drugs and to serve as the office for the physician The supply of drugs should not be kept in the doctor's cabin for hygienic and other reasons The *Leipziger Verband* has presented this ultimatum after long deliberation, and intends to insist on its adoption by ship-owners, with financial aid for physicians who lose their position on account of these new stipulations There has been no uniformity hitherto

A South American Hospital.—Mr Alfred Cartwright British consul in Ecuador, in his annual report, alludes in terms of high praise to the new general hospital of Guayaquil which he says, stands in the first rank among the hospitals of South America Special attention has been devoted to provide plentiful accommodation, abundant light, good ventilation, and efficient sewerage—requisites most necessary in a country where malarial fevers and tuberculosis are so rife The hospital is situated on the slope of the hills to the north of the city at an elevation of 26 feet above high water mark, and is connected with the main town by tramway and telephone It occupies an area of 15 acres and has a frontage of nearly 650 feet facing and overlooking the city It consists of a residence for the Sisters of Mercy, chaplain and others, at the front behind are six two story medical wards, connected by covered corridors, but isolated one from another by gardens 40 feet wide Each building is divided into suitable wards, with accommodation for 70 medical patients At a level of 16 feet above the medical wards, with intermediate gardens, there are two surgical wards, with all the requisites for 80 patients, large operating rooms, a central chapel, removed from the main buildings, and a large and modern cooking department Adjacent are a steam laundry disinfecting rooms, linen stores stabling mortuary, etc The hospital can accommodate 500 patients Each ward has been provided with balconies and benches for those who are convalescent, with sunny exposures, baths and closets, as well as lavatories and other conveniences The floor space allowed to each bed is 108 square feet and the cubical capacity is 1,765 cubic feet in the medical and 2,470 in the surgical wards Perfect surface drainage has been formed, as well as an elaborate system of underground sewerage An ample water supply has been assured through steam pumps for elevating the city supply to a large reservoir built into the hills behind the wards The exposure of the hospital being to the south it enjoys a plentiful amount of sunshine The cost of this hospital has been £32,500 ($162,500) There is a second hospital called the Central, which was a gift to the city, at a cost of £6 500 ($32 500) by a British merchant, Mr Alexander Mann a native of Nairn Scotland On an average in the two hospitals 7 000 indoor patients are attended annually The average yearly expenditure on both establishments is about £8 000 ($40 000) 80 per cent of which is provided by the municipality and 20 per cent by the government

LONDON LETTER

(From Our Regular Correspondent)

London, Oct 22, 1906

Food Inspection.

Since the Chicago revelations the subject of food inspection has received considerable attention from the public health authorities At the annual meeting of the Society of Medical Officers of Health Dr D S Davies read an important paper on "The Administrative Control of Food" He indicated the difficulties of carrying out a proper inspection of meat After seizure careful examination should be made by the health officer and full notes taken of the pathologic condition of the meat Before any further proceedings are taken the vendor should have ample means of examination Private slaughter houses should be gradually abolished and there should be a rigid system of marking and stamping all inspected meat, home and foreign Foreign meat should be required to comply absolutely with English standards and there should be some guarantee that it has passed a proper inspection More adequate inspection of tinned meats and similar foods is urgently needed There is evidence of much unwholesome preparation by no means confined to America Even in London he has found tuberculous pus in widely advertised sausages, diseased horse flesh in potted meat and decomposing animal matter in potted salmon and shrimp The only way of effective administrative control of the preparation of these and other foods is inspection at the time of manufacture of their constituents and inspection of the premises There should be a distinctive inspection mark Name and date of canning should be stamped on every tin The regulations necessary for the protection of the consumer will require fresh legislation It is astonishing, he said, how little is done to protect the milk consumer, and that the dairy industry should be allowed to pass out of our hands for the lack of a little coöperation and common sense administrative control, such as is exercised in Denmark

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, Oct 19, 1906

Remarkable Accident in a Hospital Ward.

During a suit for damages brought by the friends of a patient who died recently in one of our hospitals, the facts of a very strange case of negligence came out. As the number of doctors applying for the unpaid position of "juniors" is constantly and swiftly declining, the few paid medical officers of the ward are over burdened, and gladly accept the aid of medical students to relieve them of some of their work. Thus, in a certain ward of the general hospital, it happened that a patient with a supposed carcinoma of the stomach, in whom that organ had to be rinsed out after a test meal, was given in charge of a medical student The student did not succeed in his effort, as by some misadventure, the balloon of the pump had been fixed with the valve the wrong way out, so that instead of pumping fluid out of the stomach air was being forced into it, until suddenly there was a jerk and the patient collapsed When the alarm was raised, the condition was immediately recognized and an operation was performed but the patient died during the laparotomy At the postmortem examination it was found that the friable walls of the stomach, being infiltrated by cancerous masses had burst under the pressure of the distension from the air pumped in The case is still on trial, but the fact that a subordinate officer, or rather a guest in the ward, was allowed to undertake such an important procedure as the pumping out of a diseased stomach, has excited much comment, and will undoubtedly have the effect of stopping the admission of non qualified students to the ward as assistants Consequently, as physicians are urgently required for the work, they will have to be paid

Successful Anti Malarial Campaign in the South of Austria.

The Austria coast line on the Adriatic has from time immemorial been the seat of malaria, and the indolent inhabitants take little or no precaution to check the spread of the disease Lately the government officials have found it necessary to take stringent measures against it, because the majority of Austria's navy recruits come from these regions An imperial commission consisting of doctors government and navy officers, and the chiefs of the board of health was formed some two years ago, and they set to work to eradicate the hunting grounds of the anopheles Marshy, swampy tracts of land were partly drained, partly covered with oil and set afire Ample provisions of cinchona bark and quinin were distributed among the "mayors" of the villages and the district doctors were required to deal vigorously with all cases of malaria At Pola the chief naval port, $25 000 has been spent for dikes and for draining and leveling the marshes The success achieved by such measures was soon visible as the number of fresh cases of malaria declined 62 per cent in two years Extensive action on the same lines has been undertaken by the governor of Dalmatia the country of the most southern frontier of Austria and his report of the campaign is equally encouraging In Hungary the same measures have been adopted recently, so that uniform action is now under way in all the malarial regions of the empire with education of the population distribution of quinin and measures to eradicate mosquitoes

Fighting Quackery

A movement has been started by a few practitioners to induce the profession to refrain from prescribing ready made preparations of the type of proprietary medicines, also of such remedies as are advertised widely in the lay press The chief endeavor of this small group of energetic, level headed men is directed, however, to secure the enforcement of the so called "Kurpfuscher" paragraph by the police and local sanitary boards Advertising by inventors of electric life restorers, hair preservers and electric spectacles for the deaf has been so sharp and unchecked lately that the efforts of the physicians have been approved by many newspapers, who make it now a point of honor not to accept such advertisements Much harm has been done not only to the public, but also to the profession, by the increase of "naturopaths" and "water cures" This fact itself suggests that the public actually demands a greater consideration of mechanical and physical modes of treatment, not restriction solely to drugs and compounds of a chemical nature A suggestion has been thrown out that all contracts between doctors and the owners of hydropathic establishments should be revised by a body of competent men to see if these contracts do not conflict with the recognized medical ethics and the just demand of the public to be treated truthfully, not by charlatanism

Investigation as to the Cause of Increasing Myopia

Four thousand pairs of eyes, belonging to school children from 6 to 16 years of age, have recently been examined by order of the board of health, with a view to ascertain whether myopia is increased by the stress required by the present system of education in the public schools The increase in nearsightedness was found proportional to the size of the town and the amount of study required The prevalent degrees of myopia were from 1 to 4 D, astigmatism being present in about 12 per cent Excessive myopia was always congenital among children, in only one case was it the result of an injury to the cornea (This case has been reported elesewhere by an ophthalmologist) Spectacles were not generally worn by those children who needed them, partly from neglect, partly from unwillingness on the part of the parents School authorities will in future be empowered to compel parents to consent to the wearing of eyeglasses in such cases The report to the board of health sums the investigation up in the words "Better care for the eyes of the children may prevent the development of myopia already present, but the chief point is to prevent myopia altogether Regular examinations by qualified ophthalmologists are *conditio sine qua non* The print must be uniform, alternating large and small types on the same line should be avoided Due consideration should be paid to the nature and source of supply of artificial light in school rooms, as in our climate the months from October to February require artificial light after 3 p m

Pharmacology

The Sins of Physicians

The *California State Journal of Medicine* says

"The present trend of the nostrum agitation has evoked much discussion of the sins of the pharmacist Our *Journal* has for some few years taken a slightly different attitude, and while recognizing the many and variegated sins of the pharmacist, has also called attention to a few of the sins of the physician, which may have been, through precept or example, or even more actively, responsible, in some measure, for the former's sins

"Certainly, if the physician were sufficiently educated in his profession, he would ignore the therapeutic education so gratuitously handed out to him by the agent of the nostrum maker and he would confine his prescribing to those remedies about which facts, rather than fiction, are known It is not the druggist who rushes to the jobber for a stock of some new fangled stuff—let us say anasarcin, the 'cure for dropsy'—and then hastens to beg the physician to prescribe it Rather it is with a feeling of dread that the pharmacist hears of some such preparation, originating in a commercial mind and foisted on a credulous profession for the enrichment of the maker and not for the benefit of a suffering public and profession He knows that soon the lying 'detail man' will be about among the physicians, and then some of them, all too ignorant of what they should know, will begin to prescribe it and he will have to invest more money, uselessly, and cumber his shelves with one more of the horde of rank nostrums

"And just now the country seems to be troubled by a pest of new 'cure alls' They have appeared like grasshoppers in Kansas—from the Lord only knows where! Beware of the new nostrum, beware of the detail man who has something nice and new and curing Ask him what the Council on Pharmacy and Chemistry has done about his nice new preparation, and if you will take the time, write to the Council and ask them about it. Your patient has a right to demand that you yourself shall know what you are giving him, and this you can not know if you depend on the statements of the manufacturer or his smooth tongued agent Nine-tenths of the nostrum business is deceit, and the other tenth advertising And we are beginning to learn that deceit may exist in high places, and that manufacturers whom we have previously regarded as above reproach, may do strange things

"Our only hope is in the Council on Pharmacy and Chemistry of the American Medical Association, and in The Journal of the Association, which is to undertake to tell us, from time to time, still more of the truth about things pharmaceutical Do not allow anything to blind you to the enormous value of this Council and its work Do not allow the inspired criticism of the 'published for profit' medical (?) journals to make you believe that there is trouble in the Association or that the work of its Council is not honest Come back out of the nostrum mire and try to clean up"

The Interest of the Public in Medication.

'Public interest in the drug question," remarks *American Medicine*, "has been aroused by the present warfare against the nostrum evil, but the comments of the lay press leave considerable doubt as to whether this interest is working for good or evil to the cause of scientific therapy When laymen heard that 44 per cent of Boston prescriptions call for 'patent medicines,' the composition of which is unknown to the doctor, they immediately jumped to the conclusion that a sick man might just as well trust to the advertisements as to the doctor and save the latter's fee Of course, *it is difficult to* convince them that no sick man can diagnose his own case, as judgment is warped by every illness, but we can reach those needing help if they are convinced that we know what we are prescribing and that we prescribe for a definite purpose The accusation, made at one of the recent Boston meetings, that we are often densely ignorant of what we advise our patients to take is a most serious charge If true, there is need of considerable house cleaning in our medical store house The paucity of specifics is not a blot on medicine, but it should be widely advertised as a desirable fact for laymen to know Oliver Wendell Holmes said that if we would keep five or six drugs and cast the rest into the ocean, 'it would be better for mankind—but bad for the fishes' Since he spoke we have learned of a half dozen or so more, and have succeeded in making some palatable mixtures of others which have proved their usefulness, but the opinion has become fixed in the lay mind that there is a separate drug for each disease and each symptom The sick demand drugs and will dismiss the physician who does not prescribe them—a human trait about as old as man himself Is the physician to go with the tide or try to check it? Surely good can come from this side of the present agitation, and if every physician prescribes only that of which he knows the composition, and gives it for its known effect, there can be no blots on our methods Let the public be freed of their false opinions and the self prescribing nostrum evil will correct itself"

Tricks of the Nostrum Men

Under the above title the *Druggists' Circular*, November, 1906, discusses editorially the methods employed by manufacturers, and comments on the fact that proprietary *manufacturers* are quick to take advantage of anything which may be used as an advertisement of their goods The editorial continues

"Let something arise which may be construed as a reflection on the quality of a druggist's own output, or the probity or ability of a physician who prescribes Pharmacopeial, National Formulary or other officinal preparations, and the nostrum makers may be depended on to twist it into the semblance of an argument in favor of the use of their stuff They do not however, emphasize the fact that preparations with secret formulas are automatically protected against a charge of impurity or of being below standard, as 'purity' is an elastic term, and until there is a standard nothing can be below it

"The proprietor of a secret remedy may change the formula of his nostrum whenever he chooses, he may substitute a cheaper drug for a high priced one whenever the desire for more profits prompts him so to do, he may convert a 'catarrh' remedy into a cathartic, or tonic bitters into an emetic, and is not amenable to any man or any law for the misbranding—simply because the standard for purity and strength of his article resides only in his own mind, and may shift every time that mind changes.

"These supposititious variations in formulas are by no means purely hypothetical, as instances in which they have been made are not wanting On the other hand, there is a fixed legal standard for the druggist's goods, and when they fail to measure up to this standard, boards of pharmacy, boards of health, and the people through their prosecuting officials may, and more and more do, call the druggist to account for the shortcoming But the man who takes a proprietary medicine to day, and goes back for another dose of the same to morrow, may get an entirely different thing, and either is kept in ignorance of this fact or has no recourse on any one when he discovers the deception that has been practiced on him

"It is our duty to remind the druggist of these things, and it is the duty of the druggist to pass the reminder on to the physicians and to the public"

Mixtures Exploited as Synthetics

J O Schlotterbeck, Ann Arbor, in the *Journal of the Michigan State Medical Society*, June, 1906, calls attention to mixtures that are exploited as synthetics by some of our manufacturers, who have heretofore been considered reputable He said that he had in mind an external preparation advertised as a definite synthetic compound of a half dozen or more antiseptics and germicides and claimed to liberate at least four powerful antiseptics in a nascent state, when brought in contact with serous fluids The claims of this preparation, he stated, are preposterous and fraudulent on their very face, for such a combination of "shot in one load" is an absolute impossibility and contrary to all principles of chemistry

St Louis Pharmacists Appeal to the Medical Profession

A most timely appeal has been made by the St Louis Retail Druggists' Association to the physicians of that city presenting the claims of the new Pharmacopeia and new National Formulary and suggesting that physicians give pharmacists opportunity to use professional skill in the preparation of medicines by prescribing the preparations of the Pharmacopeia instead of proprietary mixtures

Correspondence

What Is General Suppurative Peritonitis?

Columbus, Ohio, Oct 27, 1906

To the Editor —In discussing any subject it is very essential that those who take part in the discussion shall agree on their definitions of the terms that are used In this part of the country surgeons have been in the habit, I think, of limiting the diagnosis of "general" suppurative peritonitis to cases in which the entire peritoneum from the floor of the pelvis to the diaphragm is involved in the suppurative process If the suppurative process is very limited, we have called the case one of "local" peritonitis, if the process is more widely diffused we call it "diffuse" peritonitis, but we do not use the word general unless the entire peritoneum is involved In cases of general purulent peritonitis the process has been going on as a rule for five or six days, the abdomen is distended, peristalsis has ceased, the Hippocratic countenance is marked, the pulse is usually though not invariably rapid, while the temperature may vary from high to subnormal I have never seen recovery occur in one of these cases, and I never expect to When, therefore, I saw reports of cases of "general suppurative peritonitis" in which patients had recovered under removal of the perforated appendix by short incision and stab drainage of the pelvis, with the patient in Fowler's position, with or without rectal injections of saline solutions, I felt that I had not been doing my own patients full justice, and accordingly in two or three cases of the character described above I resorted to this treatment, but without the slightest possible benefit

At the meeting of the American Association of Obstetricians and Gynecologists in Cincinnati, last September, Dr Murphy of Chicago (The Journal A M A, Oct 13, 1906, p 1219) read a paper reporting 36 cases of "general suppurative peritonitis from perforation, with one death" In the discussion which followed, however, in response to a direct question, and later more fully in private conversation, he stated that he did not mean by this title cases such as those described above, but that he included under this title all cases of peritonitis resulting from perforation, no matter whether the perforation had taken place an hour beforehand or several days Patients such as those mentioned he said were "dead already," and nothing could be done for their relief

With this understanding, therefore, of what is meant by certain writers when they report cases of "general suppurative peritonitis" terminating in recovery, I think we can all look back over our cases of local peritonitis, though without protecting adhesions, in which we have had prompt recovery following operation and drainage, and in which we have not at any time felt that we had accomplished anything so very wonderful

I think the Fowler position very important in mechanically limiting the diffusion of the inflammatory process, but the main thing is prompt operation with removal of the point of leakage and drainage The rectal use of normal salt solution may be of a little advantage in washing out the blood, but I think this is of minor importance, while I do not think the "antistreptolytic serum" of any proven value whatever in these cases

My object in writing, however, is purely to correct the misunderstanding which to my knowledge a good many surgeons have had of what some writers call "general suppurative peritonitis" J F Baldwin

Misquotations of Dr Sajous

Philadelphia, Nov 3, 1906

To the Editor —Two letters received from New York, one from San Francisco, and a clipping from a newspaper, the New York *Journal*, sent by a friend, indicate that an article I read by invitation before the Medical Association of the Greater City of New York, Oct 15, 1906, has formed the basis of sensational articles in the lay press The gross misstatements the clipping I hold contains, e g, that I have discovered "adrenalin" (sic), that I kept "life in the body of a dog for ten hours after its head had been removed"—a distorted reference to Dr Crile's experiments which I quote—, the use of adrenalin to "keep life" until "water can be expelled from the lungs,"— a fact 'absolutely established by experiments," but to which I do not even refer, etc,—were such, I thought, as to protect me against imputations on the part of our profession, as similar exaggeration had protected me once before I am sorry to state, however, that the *Medical Standard* of Chicago, in its November issue, without even mentioning the source of information, uses the misstatements of newspapers to cast reflections on my mode of work

In the first place, I wish emphatically to disclaim any connection whatever, direct or indirect, with the publicity given the paper in question My position in such matters is now, as it has always been, to avoid such publicity In the second place, my mode of work differs only from that of other investigators in that I do not content myself with two or three experiments to reach a conclusion I hold that a broad view of all questions, utilizing factors from all directions and branches of science concomitantly, will alone give us a correct estimate of the functions of the organism, and therefore of its diseases, and raise our therapeutic methods to a standard compatible with our hopes

I avail myself of the large circulation of The Journal to request the profession to consider as my statements only those published in the medical press

C E de M Sajous

The Harvard Medical School Buildings

Boston, Nov 4, 1906

To the Editor —In the last paragraph of the editorial on the Harvard Medical School Buildings in The Journal, Oct 6, 1906, page 1100, it is implied that the clinical facilities of the school are inadequate and an impression may thus be made which does not coincide with the facts Really, to the best of my knowledge and belief, the present clinical facilities are unequalled in this country The fact that the hospitals, great and small, in which clinical teaching is now carried on, are at some distance from the new buildings is of less consequence, inasmuch as bedside work begins the second half of the second year, occupying only the mornings in that year, while practically the whole of the third and fourth years are passed at the hospitals Thus twenty minutes by car or thirty minutes on foot are practically no disadvantage Within the next few years a general hospital of 250 beds, the Children's Hospital of over 100 beds and the Infants' Hospital will be in operation on land immediately contiguous to the school buildings The new clinical facilities thus provided will not replace but supplement those now enjoyed by the school We shall never consider any part of our work or facilities, therefore, "satisfactory" so long as we can see a chance for betterment Frederick C Shattuck.

[The part of the editorial to which Professor Shattuck objects was influenced by the article by Dr Mallory on the Present Needs of the Harvard Medical School, published in *Science*, September 14 —Ed]

Association News

Senn Medal Essay Contest

The Committee on the Senn Medal announces that a gold medal of suitable design is to be conferred on the member of the American Medical Association who shall present the best essay on some surgical subject The award will be made under the following conditions

(a) The name of the author of each competing essay must be enclosed in a sealed envelope bearing a suitable motto or device, the essay itself bearing the same motto or device The title of the successful essay and the motto or device is to be read at the session at which the award is made, and the name of the successful author announced

(b) All successful essays become the property of the Association

(c) The medal shall be conferred and honorable mention made of the two other essays considered worthy of this distinction at a general meeting of the Association

(d) The competition is to be confined to those who, at the time of entering the competition, as well as at the time of conferring the medal, shall be members of the American Medical Association

(e) The competition for the medal will be closed on, and no essays received after, April 1, 1907

Communications may be addressed to any member of the committee, which consists of the following A F Jonas, chairman, 18 Continental Block, Omaha, J F Binnie, 302 Argyle Building, Kansas City, Mo , Harry M Sherman 2210 Jackson Street San Francisco

Book Notices

Nursing in the Acute Infectious Fevers By G P Paul M D Assistant Visiting Physician and Adjunct Radiographer to the Samaritan Hospital at Troy New York. Illustrated Cloth Pp 200 Price $1 00 net. Philadelphia W B Saunders Co 1906

This book is intended for nurses, treatment by drugs, therefore, and physical signs and symptoms are little discussed The book is divided into three parts 1, Fever in general, 2, acute infectious fevers, with their cause, signs, symptoms, course, prognosis, care and management, 3, practical procedures Chapter II, on the "Hygiene of the Sick Room," is good The author emphasizes the necessity for quiet. Chapter III on diet is also good While the treatment by drugs is not altogether eliminated, it is noticeably less than in some similar works For example, in the treatment of hemorrhage, instead of enumerating drugs to be administered or heroic methods of treatment which could only be carried out by the physician Paul states how and where to apply an ice bag and what to have in readiness for the physician One chapter deals with the symptoms of poisoning from various drugs and the antidotes

There is also given in tabular form a list of drugs the physiologic action of which the nurse should understand On the whole, the book is to be commended

The Medical Directory of New York New Jersey and Connecticut Published by the Medical Society of the State of New York Vol viii Cloth Pp 982 1906

This directory, formerly published by the New York State Medical Association, has been continued by the reorganized state society In this eighth edition appear the names of 15,531 physicians, of whom 11,976 are in New York State, 2,276 in New Jersey and 1,279 in Connecticut In greater New York there are registered 6,034 physicians Under each name appears the residence number, office hours, telephone number, medical college and year of graduation membership in medical societies and medical appointments held The directory matter for New York State is divided into three portions, viz , Manhattan and the Bronx, Brooklyn, and the state at large These three sections are distinguished by the use of different colored papers, making reference easy Preceding the sections on New York City and Brooklyn appear street lists of physicians, arranged in order under the streets, which are alphabetically arranged Following the matter for the state of New York is a list of physicians arranged alphabetically by name which renders reference to any particular name easy The directory matter for Connecticut and New Jersey is arranged alphabetically by postoffices, followed by an alphabetical list of physicians by names This edition is fully up to the standard of preceding ones and forms a volume of about 900 pages and of convenient size Beside the directory matter proper, much additional matter is included, such as lists of state, county, district and local societies, hospitals and dispensaries, benevolent institutions, medical libraries and official boards of each state

The amount of advertising carried is not large amounting to about 55 pages The great majority of advertisements are entirely unobjectionable A few might with propriety be omitted from future editions On the whole the eighth edition is a credit to the Medical Society of the State of New York

Marriages

W L Allef, M D , to Miss Maud Franklin, both of Eldon, Mo , October 27

Herbert E. Doty, M D , to M both of Kansas City Kan , recently

Charles C Morison, M
Parker, S D , November 6

William Winton K
of Muncie, Ind October

Henry Charles Johannes, M.D , to Miss Ada May Summers, both of Chicago, recently

Samuel Searley Houlton, M.D , Baltimore, to Miss Mary Clark, at Baltimore, October 10

Herbert C Deane, M.D , to Miss Retta A. Wilson, both of Salt Lake City, Utah, October 29

Jesse R Pritchard, M.D , to Miss Martha Leigh Penniman, both of Fort Scott, Kan , October 3

Charles J Wivell, M.D , Wilkesbarre, Pa , to Miss Alice Moran, at Aldenville, Pa , October 30

George F Doyle, M.D , Philadelphia, to Miss Anna Laura Drake of Mount Sterling, Ky , recently

Edward A Glasgow, M.D , to Miss Mildred Daise Mattinly, both of Mulberry Grove, Ill , October 31

Azariah Worthington Parsons, M.D , Mexico City, Mex , to Miss Ethel E Shaman of Ohio, July 15

William J Martin, M.D , Kokomo, Ind , to Miss Nina Leona Bolt of Red Oak, Iowa, October 23

Louis J Kehres, M D , Cleveland, Ohio, to Miss Elizabeth Anna Thomas of Cuyahoga Falls, Ohio, October 31

Charles Clinton Ogle, M.D , Chambersburg, Pa , to Miss Ethel Dawn Smiley of Shippensburg, Pa , October 30

Archibald M Burt, M.D , to Miss Katherine D Wheat, both of Wheeling, W Va , at St Clairsville, Ohio, October 25

William F Wittwer, M.D , Los Lunas, N M , to Miss Anna C Nowlin of Montgomery City, Mo , at Albuquerque, N M , November 7

Deaths

Isaac M Rosenthal, M.D Medical Department of Western Reserve University, Medical Department of Adelbert College, of the Western Reserve University, Cleveland, 1876, a member of the American Medical Association, a member and formerly vice president of the Indiana State Medical Society, a member of the Maumee Valley Medical Society, one of the most prominent citizens and practitioners of Fort Wayne, Ind , first president of the Allen County Medical Society, for eight years president of the Fort Wayne board of health, and surgeon to St Joseph Hospital since its establishment, died October 29 at his home in Fort Wayne, from meningitis following middle ear disease, after an illness of several weeks, aged 74

Robert T Davis, M.D Harvard University Medical School, Boston, 1847, a veteran of the Republican party of Massachusetts, and representative from the Fall River district in the Forty eighth, Forty ninth and Fiftieth congresses, formerly mayor of Fall River, since 1847 a member and councilor of the Massachusetts society, for 56 years a member of the Bristol South Medical Society and for several years its president, state senator in 1856 and 1860, a member of the first Massachusetts Board of Charities and of the State Board of Health, died at his home in Fall River, October 29, after a short illness, aged 83

Edgar H Nichols, M D Savannah, (Ga) Medical College, 1881, acting assistant surgeon United States Marine Hospital Service, 1880 1884 honorary physician to the consulate of Spain for 15 years, formerly assistant inspector of the National Board of Health, a member of the American Public Health Association, Medical Association of Georgia, Georgia Medical Society, and Savannah Medical Society, died at the Savannah Yacht Club, Thunderbolt, from the effects of a self inflicted gunshot wound, November 5

Carl Weschcke, M.D University of Greifswald, Germany, 1856, a surgeon in the Prussian army for one year, surgeon in the United States Army for several years, a charter member of the Minnesota Medical Association, for four terms a member of the council of New Ulm, and from 1878 to 1881, from 1886 to 1889 and from 1896 to 1904 mayor of the city, who did valuable service during an Indian outbreak in 1862, died at his home in New Ulm, October 20, from chronic nephritis, after a long illness, aged 75

David Bell Birney, M.D Department of Medicine of the University of Pennsylvania, Philadelphia, 1885, a member of the American Medical Association, one of the consulting surgeons of the University Hospital, from 1888 to 1893 vaccine physician of Philadelphia and at one time resident physician of the Presbyterian Hospital, died at his home in Philadelphia, November 2, from injuries received on October 13 in a collision between his carriage and a trolley car, aged 46

N A Pratt, M.D Savannah Medical College, Savannah, Ga , 1859, an eminent scientist of Atlanta, professor of chemistry in Savannah Medical College from 1857 to 1861, a Confederate veteran, professor of geology and chemistry in Oglethorpe University, 1861, and geologist and chemist for the Confederate government from 1862 to 1865, was struck by a train when walking on the tracks of the Georgia Railroad at Decatur, Ga , and instantly killed, October 31, aged 73

Laurin Williams Reed, M.D Medical Department of the Columbian University, Washington, 1892, a member of the Illinois State Medical Society and Vermilion County and Champaign County medical societies, a practitioner of De Land, Ill., for ten years and for a few months in Fairmount, Ill , died at his home in Bridgeport, Conn , October 9, eight days after being attacked with appendicitis, and three days after operation, from pulmonary embolism, aged 36

Sylvester L Nidelet, M.D Medical Department of the St Louis University, St Louis, Mo , 1852, for several years a surgeon in the United States Army, from 1882 to 1886 coroner of St Louis, Indian agent for the Sioux for one year, and after the war chief surgeon at the Whetstone reservation, died at his home in St Louis, from pneumonia, October 30, aged 77

William T Collins, M.D University of Georgetown, Medical Department, Washington, D C , 1865, a veteran of the Civil War, president of the first board of regents of the University of North Dakota, Grand Forks, and for one or two sessions a member of the territorial legislature of North Dakota, died recently at his home in Santa Monica, Cal , aged 68

Henry Marshall Bourne, M.D New York University, New York City, 1875, president of the medical board of Corning Hospital, member of the Steuben County Medical Society, and Medical Society of the State of New York, died at his home in Corning, N Y , from chronic nephritis, October 24, aged 54

Edward Linden Naret, M.D Maryland Medical College, Baltimore, 1903, a member of the American Medical Association, died at his home in Morgantown, W Va , from pneumonia which followed two weeks after an attack of appendicitis, November 1, after an illness of two days, aged 41

George A. Cable, M.D University of Wooster Medical College, Cleveland, Ohio, 1873, a practitioner and clergyman of Minnesota for many years, who did effective work in California during the prevalence of bubonic plague, died at the home of his son in law in Minneapolis, October 30, aged 60

Frederick C Bucher, M.D Department of Medicine of the University of Pennsylvania, Philadelphia, 1895, formerly a practitioner of Columbia, Pa , died at the home of his father in law in Mount Joy, Pa , after an illness of several months, October 30, from pachymeningitis, aged 38

Rinaldo P Hazzard, M.D Vanderbilt University Medical Department, Nashville, Tenn , 1886, formerly a practitioner of Zenas, Edinburgh, Ind , and of Louisville, Ky , died at St. Anthony's Hospital, Louisville, October 18, after a long illness, from senile debility, aged 78

Orsman S Kenyon, M.D Eclectic Medical College of the City of New York, 1879, postmaster of Taberg for eight years, and highway commissioner and town clerk, for 38 years a practitioner of Taberg, N Y , died at his home in that place after an illness of five weeks, aged 70

W M Marshall Thompson, M.D Tulane University of Louisiana Medical Department, New Orleans, 1872, for many years coroner of St Landry Parish, La , a member of the city council of Opelousas, died at his home in that city, October 28, after a long illness, aged 56

John W Farmer, M.D College of Physicians and Surgeons, Baltimore, 1868, one of the oldest practitioners of Radford, Va , died in the hospital in that place, August 25, a few hours after being injured by the overturning of a wagonload of lumber

Levinus W Cornwell, M.D Castleton (Vt.) Medical College, 1846, formerly a surgeon in the army, and for 38 years a leading practitioner of Alden, N Y , died at his home in that city, October 22, after an invalidism of 10 years, aged 84

Byron W Hinds, M.D University of Nashville Medical Department, 1866, county commissioner of Madison County, Ala , a Confederate veteran, died at his home in New Hope, August 21, after an illness of several weeks, aged 71

Elliot H. Wheeler, M.D Missouri Medical College, St Louis, 1880, a veteran of the Civil War and for many years a practitioner of Southern Illinois, died suddenly near Murphysboro, Ill , October 29 from heart disease, aged 66

John Theodore Heard, M D Harvard University Medical School, Boston, 1859, of Boston, a surgeon throughout the

Civil War, died at his summer home in Magnolia, Mass., September 2, from organic heart disease, aged 70

Irving Washington Hewit, M.D Medical College of Indiana, Indianapolis, 1883, formerly a practitioner of Bellwood, Neb, died at his home in Spokane, Wash, August 21, from chronic nephritis, after a long illness, aged 52

Thomas Palmer Jerman, M.D Medical College of the State of South Carolina, Charleston, 1849, for many years a practitioner of Ridgeway, N C, died at the home of his son in Raleigh, N C, October 22, aged 80

M G Hatcher, M.D University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1864, formerly of St. Louis, died at Ridgeley Farm, near Dorsey, Ill., from dropsy, after a long illness, October 12

Archibald Fraser, M.D New York Homeopathic College and Hospital, New York City, 1870, died at his home in Ypsilanti, Mich, from typhoid fever, October 27, after an illness of two months, aged 62

Daniel W Overholt, M.D Medical Department of the University of Iowa at Keokuk, 1867, died suddenly from cerebral hemorrhage at his home in Columbus Junction, Iowa, October 28, aged 68

Annie W Martin, M.D Hygeio Therapeutic College of New York, New York City, 1865, died at her home in Elgin, Ill, October 24, from pneumonia, after an illness of six days, aged 79

Jeremiah P Smith, M.D Jefferson Medical College, Philadelphia, 1887, died at his home in Linglestown, Pa, November 1, after an illness of two days, from cerebral hemorrhage, aged 38

Thomas E Cone, M.D New York University, New York City, 1873, formerly a practitioner of Brooklyn, died from tuberculosis in Bellevue Hospital, New York, October 18, aged 53

Julian H Abbitt, M.D. College of Physicians and Surgeons, Baltimore, 1892, died suddenly from acute gastritis, at his home in West Appomattox, Va., November 1, aged about 38

Howard M Griffee, M.D Department of Medicine of the University of Pennsylvania, Philadelphia, 1875, died at his home in Taylorsville, Pa, October 28, after a long illness, aged 56

Harlan C Baker, M.D Starling Medical College, Columbus, Ohio, 1866, died at his home in New Salem, Ohio, October 29, from cerebral hemorrhage, after a brief illness, aged 65

John W S Goudy (Examination, Ohio), died at his home in Newcomerstown, Ohio, October 13, after an illness of four months, from cerebral hemorrhage, aged 78

Frank Beers, M.D Jefferson Medical College, Philadelphia, 1881, of Bushkill, Pa., died suddenly in a theater in Lebanon, Pa, October 29, from heart disease, aged 47

William H Fayette, M.D Chicago Medical College, 1875, died at his home in Nickerson, Kan., October 27, from cerebral hemorrhage, after an illness of five days

Daniel Stoner Crumpacker (Years of Practice, Indiana), a veteran of the Mexican and Civil wars, died at his home in Union Mills, Ind., August 20, aged 83

Charles Chandler Weaver, M.D Hahnemann Medical College of Philadelphia, 1879, died at his home in Fox Chase, Philadelphia, November 1, aged 48

John P Hedrick, M.D Keokuk (Iowa) Medical College, 1897, died suddenly from heart disease at his home in Loraine, Ill, October 28, aged 48

George S Scheiber, M.D Rush Medical College, Chicago, 1895, died at his home in Chicago, October 30, from cerebral hemorrhage, aged 37

Mary D Dewey, M D Eclectic Medical College of the City of New York, 1870, died at her home in Saratoga Springs, N Y, August 20, aged 84

George W Gustin (Years of Practice, Ohio), who retired from practice many years ago, died at Union Furnace, Ohio, August 24, aged 93

David S Stanton (Years of Practice, Indiana), for many years health officer of Portland, Ind, died at his home in that city, August 22

Frank H Morehouse, M.D Detroit College of Medicine, 1901, of Detroit, died from heart disease in Jackson, Mich., September 5, aged 29

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers U S Army week ending Nov 10, 1906

Heysinger Jas D, asst. surgeon, ordered to Key West Barracks Fla for duty

Stedman Chester J, asst. surgeon, leave of absence extended one month

Whaley A. M, asst. surgeon, ordered to Fort Sam Houston Texas for duty

Boyer Perry L. asst.-surgeon relieved from duty at Fort Sam Houston, Texas, and ordered to Army and Navy General Hospital, Hot Springs, Arkansas, for duty

Ragan, Charles A. asst. surgeon relieved from duty at Army and Navy General Hospital, Hot Springs Arkansas, and ordered to Fort Monroe Va, for duty

Hereford, John R. contract surgeon, ordered from Fort Screven Ga. to the Army and Navy General Hospital, Hot Springs, Ark for treatment.

Stearns, Charles H contract surgeon left Fort Monroe, Va, for Fort Screven Ga. for duty

Hull Alva R. contract surgeon granted leave of absence for two months.

Reagles, James, contract surgeon relieved from duty at Fort Keogh Mont. and ordered to Fort Ontario N Y for duty

Van Kirk Harry H contract surgeon relieved from duty at Fort Sill Okla. and ordered to Fort Logan Colo for duty

Slater Ernest F contract surgeon relieved from duty at Fort Hancock N J, and ordered to Fort Banks, Mass. for duty

Pinquard, Joseph contract surgeon ordered from Fort Robinson, Neb to Fort Meade, S D for temporary duty

Richardson, William H, contract surgeon granted leave of absence for fourteen days.

Mason George L., dental surgeon, left Fort Moultrie S C. and arrived at Fort McPherson Ga, for duty

Hughes, Leonard S contract surgeon, granted leave of absence for one month.

Phelan, Henry du R. contract surgeon, ordered to Fort Rosecrans, Cal., to Presidio of Monterey, Cal for duty

Purnell, Julius M., contract surgeon, relieved from duty at Presidio of Monterey Cal and ordered to the Department Rifle Range, Point Bonita, Cal., for duty

Brown Wilmont E, contract surgeon left Fort Walla Walla Wash, on leave of absence for three months

Navy Changes.

Changes in the Medical Corps, U S Navy, for the week ending Nov 10, 1906

Streets T H medical director to duty in command of the Naval Hospital Washington D C.

Dickinson D medical director detached duty in command of Naval Hospital Washington D C. to continue other duties

Payne, J H Jr P A surgeon, to duty at Navy Recruiting Station Providence, R. I

Hart, G G acting asst. surgeon, to duty with Marine Recruiting Party Atlanta, Ga.

Garrison, P E, asst. surgeon detached Naval Medical School to duty as medical zoologist for the Bureau of Science Manila, sailing from Seattle, Nov 28 1906

Morse E. T., pharmacist, to duty at the Naval Medical School Hospital, Washington.

Rixey, P M., surgeon general to special temporary duty in connection with the President s trip to Panama and Porto Rico

Langhorne C. D surgeon detached *Brooklyn* when placed in reserve to home and wait orders.

Kennedy J T P A. surgeon detached duty at the Naval Station Guantanamo home and wait orders.

Chapman R. B asst.-surgeon detached *Supply* to Naval Station Cavite P I

Backus, J W P A. surgeon detached from *Texas* when placed in reserve to duty Naval Station Guantanamo, Cuba, and additional duty on the *Amphitrite*.

Phillips T N pharmacist, detached Naval Medical School Hospital Washington, Nov 14 1906 to the U S Naval Hospital New Fort Lyon, Bent County Colo

Berryhill T A surgeon detached duty U S Naval Medical School Washington Nov 14 1906 in command of Naval Hospital, New Fort Lyon Bent County Colo

Field J G., surgeon detached from duty in the Bureau of Medicine and Surgery Nov 14 1906 to duty at the U S Naval Hospital Bent County Colo

Webb U R P A. surgeon detached duty on the *Brooklyn* when that vessel is placed in reserve to the Naval Torpedo Station Newport R I

Public Health and Marine Hospital Service

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine Hospital Service for the seven days ended Nov 7 1906

Wertenbaker C P surgeon relieved from Quebec and directed to proceed to St. John N B for duty

Grubbs S B I A. surgeon leave of absence granted for one day October 30 revoked

Parker H B., P A. surgeon granted leave of absence for two months and fifteen days from Nov 29 1906

Goldberger Joseph I A surgeon detailed to represent the service at the meeting of the American Public Health Association to be held in the City of Mexico Dec. 3 1906

Amesse J W P A surgeon relieved from duty at Gulfport Miss and directed to proceed to Washington, D C, for temporary duty in the Hygienic Laboratory

Francis Edward P A. surgeon granted leave of absence for ten days from Nov 20 1906

Boggess J S asst surgeon directed to proceed to Buffalo N Y for special temporary duty on completion of which to rejoin his station at Stapleton, N Y

Collins George L. asst. surgeon granted leave of absence for one day Nov 3 1906 under Paragraph 189 of the Regulations

Steger E M asst. surgeon relieved from duty on the Revenue Cutter *Algonquin* and directed to proceed to New York, N Y, reporting his arrival by wire

Ashford F A asst. surgeon granted leave of absence for one month and fifteen days, from Nov 15 1906

Light S D W acting asst. surgeon granted leave of absence for thirty days from Nov 3 1906

Lyall R acting asst. surgeon granted leave of absence for one day under Paragraph 210 of the Regulations.

Sinks E D acting asst surgeon granted leave of absence for five days from Nov 7 1906

Wetmore W O acting ast surgeon relieved from duty at Buffalo N Y and assigned to duty at Ellis Island N Y

Wetmore W O acting asst -surgeon granted leave of absence for two days from Nov 1 1906

Holsendorf B E pharmacist granted leave of absence for twenty-eight days from Dec. 4 1906

Kepler G K pharmacist directed to proceed tȯ Chicago Ill and report to the medical officer in command for duty and assignment to quarters

BOARDS CONVENED

A board was convened to meet at Ellis Island N Y upon the call of the chairman for the purpose of examining Pharmacist George Neves to determine his fitness for promotion to pharmacist of the Second Class Detail for the board Surgeon G W Stoner Chairman P A Surgeon John McMullen Recorder

A board was convened to meet at the Bureau on Nov 7 1906 for the physical examination of officers of the Revenue-Cutter Service Detail for the board Asst.-Surgeon-General W J Pettus, Chairman Asst Surgeon General J W Kerr Recorder

A board was convened to meet at San Francisco Cal on Nov 1 1906 for the purpose of examining applicants for cadetships in the Revenue-Cutter Service Detail for the board Surgeon H W Austin Chairman Asst Surgeon F H McKeon Recorder

A board was convened to meet at Seattle Wash on Nov 1 1906 for the purpose of examining applicants for cadetships in the Revenue-Cutter Service Detail of the board Asst. Surgeon H G Ebert Chairman Acting Asst. Surgeon F R. Underwood, Recorder

A board was convened to meet at San Francisco Cal on Nov 12 1906 for the purpose of making physical examinations of officers of the Revenue-Cutter Service Detail for the board Surgeon H W Austin Chairman P A. Surgeon C H Gardner Recorder

A board was convened to meet at Port Townsend Wash on Nov 12 1906 for the purpose of making a physical examination of an officer of the Revenue-Cutter Service Detail for the board Surgeon W G Stimpson Chairman P A Surgeon J H Oakley Recorder

A board was convened to meet at Stapleton N Y on Nov 12 1906 for the purpose of making physical examinations of certain officers of the Revenue-Cutter Service. Detail for the board P A Surgeon J A. Nydegger Chairman P A Surgeon H. W Wickes Recorder

A board was convened to meet at Boston Mass on Nov 12 1906 for the purpose of making a physical examination of certain officers of the Revenue-Cutter Service Detail for the board Surgeon R M Woodward Chairman P A Surgeon B S Warren Recorder

A board was convened to meet at Wilmington N C on Nov 12 1906 for the purpose of making a physical examination of certain officers of the Revenue-Cutter Service Detail for the board P A Surgeon C H Lavinder Chairman

A board was convened to meet at San Juan P R. as soon as practicable for the purpose of making a physical examination of certain officers of the Revenue-Cutter Service Detail for the board P A. Surgeon M H Foster Chairman Acting Asst. Surgeon P del Valle Atilles Recorder

A board was convened to meet at Juneau Alaska as soon as practicable for the purpose of making a physical examination of an officer of the Revenue-Cutter Service Detail for the board P A Surgeon M W Glover Chairman

Health Reports.

The following cases of smallpox, yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine Hospital Service during the week ended Nov 9 1906

SMALLPOX—UNITED STATES

District of Columbia Washington Nov 3 1 case.

Louisiana New Orleans, Oct 27 Nov 3 2 cases (1 case imported)

Wisconsin Milwaukee Oct. 20-27 14 cases

SMALLPOX—FOREIGN

Africa Cape Town Sept. 15-22 2 cases

Brazil Bahia Sept 22 29 9 cases

Canada Moncton N B., vicinity of. Nov 1 100 cases

Chile Antofagasta, Sept. 12 26 30 cases 10 deaths Coquimbo Sept 8 22 30 cases 1 death

Ecuador Guayaquil Oct 7 14 6 deaths.

India Bombay Sept. 25-Oct. 2 1 death Madras Sept. 29-Oct 5 3 deaths

Italy General Oct 11 18 2 cases

Mexico Vera Cruz, Oct 6-13 1 case 1 death (imported from Mexico)

Persia Ispahan Aug 31 present

Russia Moscow Sept 30-Oct 6 5 cases Odessa, Sept. 30-Oct 6 2 cases

YELLOW FEVER

Cuba, Havana Oct. 31 Nov 6 9 cases 1 death Neuva Paz Nov 2, 1 case Rodas Nov 6 1 case Santa Clara Nov 1, 1 case.

Mexico Merida, Oct. 14-20 1 case.

Ecuador Guayaquil, Oct. 7 14 1 case 3 deaths.

CHOLERA.

India Bombay Sept. 25-Oct. 2, 12 deaths, Calcutta, Sept 15 29 44 deaths Madras, Sept. 29-Oct 5 65 deaths

PLAGUE.

India General, Sept 15-29 11 381 cases 12 702 deaths Bombay Sept 25 Oct 2, 40 deaths Calcutta, Sept 15-29 11 deaths

Persia Seistan Aug 1 17 2 cases, 2 deaths

Peru Lima, Sept. 14, 1 case.

Medical Education and State Boards of Registration.

COMING EXAMINATIONS

Missouri State Board of Health Kansas City, November 26-28 Secretary J A B Adcock, Warrensburg

New Mexico State Board of Health, Santa Fe December 3 Secretary Dr B D Black, Las Vegas

Pennsylvania State Medical Examining Board, Industrial Hall Philadelphia December 4-7 Secretary Dr Joseph E Willetts Pittsburg

Wyoming Board of Medical Examiners State Capitol, Cheyenne December 5 Secretary Dr S B Miller Laramie

Delaware State Medical Society Examining Board, Dover December 6 and by the Homeopathic Board at Wilmington on same date Secretary of the Medical Council Dr P W Tomlinson Wilmington

Ohio State Board of Medical Registration and Examination Columbus December 11 13 Secretary Dr Geo H Matson Columbus

Iowa State Board of Medical Examiners Office of State Board of Health Des Moines December 11 13 Secretary, Dr J F Kennedy Des Moines

Virginia Medical Examining Board, Richmond December 11 14 Secretary Dr R. S Martin Stuart.

Maryland Board of Medical Examiners, 847 N Eutaw St, Baltimore, December 12 15 Secretary Dr J McP Scott Hagerstown

California State Board of Medical Examiners San Francisco December 18 Secretary Dr Chas L. Tisdale, Alameda.

Oklahoma Board of Medical Examiners Guthrie December 26 Secretary Dr J W Baker Enid.

Colorado College Report for 1905—From correspondence with Dr S D Van Meter, secretary of the Colorado State Board of Medical Examiners, we learn that two of the failures charged against the Denver and Gross College of Medicine in the Educational Number of The Journal, Aug 25, 1906, were undergraduates and, therefore, the college is not to be held responsible for them Hereafter graduates of Colorado schools will be examined before being licensed in Colorado, and the schools of that state will doubtless make a better showing in the examination statistics, since formerly the best students were licensed without examination, and were, therefore, not considered in figuring the percentage of failures

Washington July Report—Dr C W Sharples, secretary of the State Medical Examining Board of Washington, reports the written examination held at Tacoma, July 3 5, 1906 The number of subjects examined in was 17, total number of questions asked, 100, percentage required to pass, 75, and 70 for those having had 10 years' practice. The total number of candidates examined was 109, of whom 84 passed and 25 failed The following colleges were represented

PASSED

College	Year Grad	Per Cent.
University of California	(1904)	80 9
University of Southern California	(1906)	87 6
College of P & S, San Francisco	(1906)	80
California Med Coll	(1896)	79 5
Cooper Med Coll (1896) 69 8	(1898)	84 4
Denver and Gross Med Coll	(1904)	91 9
Gross Med. Coll (1888) 74.8	(1902)	89 8
Colorado School of Med	(1890)	70 9
Yale University Med. School	(1904)	84 6
College of P S Chicago (1900) 78 3 (1901) 75 7, 81 2 (1906) 79 3 82.4 85		
Northwestern Univ Med. School (1902) 80 2 (1904) 93 6, (1905) 91 6 (1906) 89 8		
American Med Miss Coll (1904) 86	(1905)	83 6
Bennett Med. Coll Eclec. Chicago	(1897)	71 4
Dunham Med Coll Homeo Chicago* (1898) 70 3	(1901)	79 6
Rush Med. Coll (1897) 87 4 (1901) 75 80 7 (1902) 84 2 (1903) 83 4 90 7 (1904) 86 5 (1906) 91 3		
Hahnemann Med Coll Chicago	(1884)	70 1
Medical Coll of Indiana	(1905)	80 4
Central Coll of P & S Indianapolis	(1897)	76 8

Indiana Med. Coll	(1906)	85 3
University of Iowa	(1885) 72 3 (1892) 75 (1896) 76 8, (1905)	81 2
University of Louisville	(1906)	85 5
Tulane University	(1906)	85 4
Tufts Coll. Med School	(1902)	80 1
University of Michigan	(1894) 77 1 (1905)	86 7
University of Minnesota	(1904) 81 9 (1905)	75 3 82 5
Kansas City Med. Coll	(1892) 75 4, (1893) 77 3, (1898) 76 3, (1904)	78 4
Barnes Med Coll	(1906)	78 2 79 2
St. Louis University (Marion Sims Beaumont Med Coll)	(1898) 81 (1904)	79 5
Washington University St. Louis	(1893) 74 2 (1898)	80 5
University of Nebraska	(1904)	78 2
College of P & S New York	(1904)	82
University of Buffalo	(1901)	83 3
Bellevue Hosp Med. Coll	(1891)	81 2
Starling Med. Coll	(1895)	70 7
College of P & S Cleveland	(1904)	78 1
University of Oregon	(1904) 79 5 (1905) 82 (1906)	77 6 81 2 82 9, 86 7
Jefferson Med. Coll	(1906)	82.7
Woman s Med Coll. of Pennsylvania	(1892)	72 3
University of Pennsylvania	(1895) 91 2 (1904)	80 4
Vanderbilt University	(1905)	83
University of the South	(1901)	82.3
University of Nashville	(1902)	79
University of Virginia	(1904)	82 1
University of Vermont	(1904) 77 7 (1905)	79 3
University of Jurjev, Dorpat, Russia	(1902)	77 5

FAILED

Laval University Quebec	(1896)	73 2
College of P & S, San Francisco	(1902)	73 2
College of P & S, Chicago	(1898)	63 7
Howard University	(1892)	68 4
Hahnemann Med. Coll Chicago	(1896)	68 1
Hering Med. Coll	(1906)	58 9
Northwestern Univ Med School	(1884)	62 7
Bennett Med. Coll, Eclec. Chicago	(1906)	74 1
College of P & S Kansas City	(1901)	57 7
University of Louisville	(1871)	58 8
Louisville Med. Coll	(1904)	67 2
College of P & S Baltimore	(1898)	68.2
University of Michigan	(1904)	72 9
Saginaw Valley Med Coll	(1900)	71 1
University of Minnesota	(1905)	72.3
Missouri Med Coll †	(1889)	59 8
Lincoln Med Coll	(1897)	63 5
Columbia University	(1893)	69
Willamette University	(1906)	72, 74 4
Barnes Med Coll	(1906)	60
Chattanooga Med Coll	(1906)	71 3
Vanderbilt University	(1895)	66 2
Dallas Med Coll	(1903)	47 5
Toronto University	(1904)	73 8
Imperial University Tokio Japan	(1900)	72.2

* Merged with Hering Medical College in 1902

† Merged with Washington University in 1889

Rules Governing Examinations in Wisconsin—Dr J V Stevens, secretary of the State Board of Medical Examiners has sent us a statement showing the number of questions asked in the various branches and the rules governing the licensing examination These are as follows

QUESTIONS

In the examination a total of 100 questions are asked, divided among the various subjects as follows General surgery 8 laryngology 2 ophthalmology 3 anatomy 8 pediatrics 4, obstetrics 8 gynecology 4 pathology, 8, bacteriology 2 histology 2 materia medica and therapeutics 7 medicine 8 neurology 5 dietetics 4 medical jurisprudence 3 physiology 7 hygiene 2 physical diagnosis 3 chemistry, 7 toxicology 3 and urinalysis 2

RULES FOR EXAMINATION

First Questions will be given out and answers collected punctually at the time specified for each section No papers will be accepted unless the examination be actually held at the appointed time The time allowed for each examination shall be limited to one hour for every five questions.

Second If any candidate withdraws *without* permission from the sight of the examiner his or her examination shall be closed

Third A general average of 75 per cent. shall be necessary to license a candidate (he or she having otherwise complied with the law) provided, that in no one branch shall he percentage be less than 60

Fourth Each applicant shall register his or her name opposite a number in a book kept by the secretary for that purpose and shall mark his or her paper with said number and shall be known to the members of this board only by said number until his or her papers have been examined and marked and any paper having any other mark or device shall be thrown out without further examination

Fifth All examinations shall be in writing and in the English language

Sixth Each candidate shall be seated at least four feet distant from those adjoining

Seventh Any prompting talking passing of paper or cribbing may be deemed sufficient to exclude candidate so doing from completing the examination

District of Columbia July Report.—Dr George C Ober, secretary of the Board of Supervisors in Medicine reports the written examination held at Washington July 12 1906 The number of subjects examined in was 17, total number of questions asked, 80 percentage required to pass, 75 The total number of candidates examined was 36 of whom 24 passed and 12 failed The following colleges were represented

PASSED

College	Year Grad	Per Cent.
George Washington University	(1906)	76 2 77 6 78 78 6 78 9 80 5 80 7 81 1 81 7 82 7 84 3 85 86 1 88 94
Howard University	(1906)	80 1, 85 8, 89 5
Georgetown University	(1905) 92 6 (1906)	84 87 4
Baltimore Med. Coll	(1905)	83 1
Hahnemann Med Coll Philadelphia	(1904) 81 (1906)	80 5

FAILED

George Washington University	(1905) 71 7 (1906)	65 9 68 5 72 8 73 7 74 2
Georgetown University	(1903) 71 5 (1906)	65 9 68 5
National University Medical Dept *	(1902)	32 3
University of Louisville	(1878)	74 2
Southern Homeo Med. Coll	(1906)	64 5
University of Virginia	(1906)	68 8

* Merged with Columbian (now George Washington University) Medical Dept. in 1903

Medical Organization

Washington.

Asotin County Medical Society—At a meeting held recently in Asotin a permanent organization of this society on the standard plan was effected and the following officers elected President, Dr Lafayette Woodruff, Asotin, vice president, Dr Paul W Johnson, Clarkston, secretary, Dr Isaiah U Temple, Clarkston, and treasurer, Dr Stephen D Brazeau, Asotin

Clarke County Medical Society—With the assistance of Drs James R Yocum and Charles McCutcheon, Tacoma, the physicians of Clarke County met at Vancouver and organized a society on the standard plan, electing Dr J Randolph Smith, Vancouver, president, and Dr Edward F Hixon, Vancouver, secretary

West Virginia.

Berkeley County Medical Society—Dr William W Golden, president of the Medical Society of the State of West Virginia, met the physicians of Berkeley County at Martinsburg and assisted in the organization of a society on the standard plan The following officers were elected Dr J McKee Sites, president, Dr W T Henshaw, vice president, Dr Clifford R. Sperow, secretary, and Dr Newton D Baker, treasurer, all of Martinsburg

Wisconsin.

Door County Medical Society—A county medical society was organized in Sturgeon Bay recently with the following officers Dr Herbert N Leete, Sturgeon Bay, president, Dr L. E Gotham, Sawyer, vice president, and Dr Gustave R Egeland, Ephraim secretary and treasurer, Dr George F Hilton, Sturgeon Bay, delegates to the state society, and Drs Nicholas Z Wagner, Sturgeon Bay, J E Bingham, Sawyer, and Thomas C Proctor, Sturgeon Bay, censors

Dane County Medical Society—At the reorganization of the county medical society at Madison the following officers were elected President Dr Charles S Sheldon, Madison, vice presidents, Drs Louis R Head Madison, Peter C Gilberson, Mount Horeb, and Byron W Shaw, Waunakee, and secretary and treasurer, Dr Julius Noer, Stoughton

Society Proceedings

COMING MEETINGS

Southern Surg and Gyn Assn Baltimore Dec. 11 13
American Public Health Assn Mexico City Dec. 3 7

MISSISSIPPI VALLEY MEDICAL ASSOCIATION

Thirty second Annual Meeting, held at Hot Springs, Ark , Nov 6-8, 1906

The President, Dr J Henry Carstens, Detroit, in the Chair

Officers Elected

The following officers were elected for the ensuing year President, Dr H H Grant Louisville, Ky , vice presidents Dr Barr, Hot Springs, Ark , and Dr T C Witherspoon, St Louis secretary, Dr Henry Enos Tuley, Louisville, Ky treasurer Dr Samuel C Stanton, Chicago

Columbus Ohio, was selected as the place for holding the next annual meeting, October, 1907

Addresses of welcome were delivered by Mayor George R Belding Dr S P Collings and Hon Charles D Creaves The response to these addresses [illegible] delivered by Dr J M Mathews, Louisville Ky

Future of the Medical Profession.

President Carstens in his address referred to the early history of medicine Great advances have been made during the last 35 years By gradually increasing the requirements, only the best minds have been able to enter the practice of medicine Only men with the best mental caliber should be allowed to practice medicine

In referring to organization, he said that as the country is large it is desirable to have larger societies in different parts of the country The American Medical Association, however, should not establish a rule and force certain states to join together in the form of a branch, but this should be left to the members to organize in any way they desire If the East, the West or the South desires to form an association, all right If either should run over the border into some other branch, what is the difference? We can have a Mississippi Valley Medical Society, a Southern society or a New England society and a Rocky Mountain society, and still any member of the American Medical Association should have a right to belong to any one or all of them He feels sure that at the next meeting of the American Medical Association this point will be settled

The great men of the medical profession are working unselfishly for the good of the race. The moral tone has been materially elevated.

President Carstens then devoted considerable attention to liars in the medical profession, saying that they have diminished materially, and with a higher standard he hopes they will soon be eliminated entirely There are still some liars in the profession, but in his experience there are few among the young members Some of these liars are of the pious order One variety of liar is the man who claims to be a surgeon, but who treats typhoid fever and pneumonia if the patients are wealthy He will even treat measles and cholera infantum if the grandfather is a millionaire

He closed his remarks with an eloquent plea for thorough general knowledge on the part of the medical profession The days when the medical man only knew something about drugs, or how to treat some diseases, are past The physician should take an interest in everything that affects the community in which he lives He should be first and foremost and all the time a physician, but still he should be informed on all kinds of questions He should thoroughly understand the workings of the inner mind, quickly grasp the weakness and the strength of an individual's mentality, and thus be able to shape the course of the individual and of the community

(To be continued)

PHILADELPHIA BRANCH OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

Regular Meeting, held Nov 6, 1906

The regular November meeting was held in the College of Physicians and was devoted to the discussion of "The Work of the Council on Pharmacy and Chemistry of the American Medical Association"

The meeting was attended by over forty members and visitors, all of whom manifested a keen interest in the subject matter under discussion, many of them taking an active part in the discussion itself

The Proprietary Medicine Question and the Council on Pharmacy and Chemistry

The program that had been prepared to introduce the subject matter included the following communications

S P Sadtler, Ph.D, professor of chemistry in the Philadelphia College of Pharmacy, and also a member of the Council on Pharmacy and Chemistry of the American Medical Association, described "The Work of the Council"

Dr Alfred Stengel, professor of clinical medicine in the Medical Department of the University of Pennsylvania, spoke of "Endorsement of the Council by Medical Men."

Chas H LaWall, assistant professor of pharmacy in the Philadelphia College of Pharmacy, spoke of "The Effect of Publicity on the Standing and the Use of Nostrums"

Prof W A. Puckner, Chicago, secretary of the Council on Pharmacy and Chemistry of the American Medical Association, contributed a paper on "The Needs of the Council," which, in the absence of the author was read by the secretary of the local branch.

Approval of the Council

The subject was further discussed by Messrs Thum, Apple, Kramer, Lowe, Potts, Riegel, Vanderkleed and others, and the following resolutions were adopted

RESOLUTIONS FAVORING EXHIBITIONS OF PHARMACOPEIA AND FORMULARY PREPARATIONS

Whereas It appears to be desirable that physicians be made more fully acquainted with the contents of the U S Pharmacopeia and of the National Formulary and that they be given some practical demonstration of the resoruces and the abilities of present day pharmacists, therefore be it

Resolved, That the Philadelphia Branch of the American Pharmaceutical Association favors the holding of a scientific exhibition of U S P and N F preparations, in connection with annual or stated meetings of medical societies in its territory, and, be it further

Resolved That a committee of five members be appointed by the chair to cöoperate with the executive committee in obtaining permission for and in organizing such exhibtions.

RESOLUTIONS ENDORSING COUNCIL ON PHARMACY AND CHEMISTRY

Whereas, The practice of pharmacy constitutes an important branch of the science of medicine and

Whereas Secrecy in any one department or branch of a science must of necessity be a menace to and detract from accurate observation and rational progress in other departments and branches of the same science and

Whereas, The American Medical Association in establishing the Council on Pharmacy and Chemistry has recognized and endorsed this underlying principle of true progress in the science of medicine through the department of pharmacy therefore be it

Resolved That we the members of the Philadelphia Branch of the American Pharmaceutical Association heartily endorse the objects and the aims of the Council on Pharmacy and Chemistry of the American Medical Association and, be it further

Resolved That, individually as well as collectively we pledge our active support and cöoperation to the Council, in the work now in hand.

Future Meetings

It was announced that the remaining meetings of the Philadelphia Branch of the American Pharmaceutical Association have been arranged for on the following evenings, at the College of Phyisicians, 15th and Locust Sts

December.—Wednesday, Dec. 12, 1906
  The Federal Pure Food and Drug Law
January —Friday Jan 4 1907
  The Debasing Influences of Fraudulent Nostrums
February —Tuesday Feb 5 1907
  Higher Educational Requirements for Pharmacists
March —Tuesday March 5 1907
  The Indiscriminate Renewal of Prescriptions
April —Tuesday April 2, 1907
  Popularizing U S P and N F Preparations
May —Tuesday May 7 1907
  The Proposed Reorganization of the American Pharmaceutical Association

It was also announced that as pharmacists will find the subject matter to be discussed at these meetings of direct importance to them, they are invited to come and bring their friends

MEDICAL SOCIETY OF VIRGINIA.

Thirty sixth Annual Session, held at Charlottesville, Sept 9 11 1906

Under the Presidency of Dr. Lomax Gwathmey, Norfolk, Va

Officers Elected

The following officers were elected for the ensuing year President, Dr Paul B Barringer, Charlottesville, Va , vice presidents, Drs B B Bagby, Walkerton, F H. Hancock, Norfolk, and Dr C F Rinker, Upperville, recording secretary, Dr Landon B Edwards, Richmond (re-elected), corresponding secretary, Dr John F Winn, Richmond (re elected), treasurer, Dr R. M Slaughter, Theological Seminary (re elected) Delegates to the American Medical Association Dr Stuart McGuire, Richmond, Dr W E Anderson, Farmville, Dr W F Drewry, Petersburg

Chase City was chosen as the next place of meeting

Life Insurance Fees.

The Committee on Fees for Life Examinations made the following recommendations

That a minimum fee of $5 be charged by members of the society when urinalysis is required on all policies of $5 000 or less. That a minimum fee of $3 be charged on all policies of $3 000 or less when a urinalysis is not required. That no discrimination be made in favor of fraternal or benevolent organiza tions That this society express in no uncertain language its disapproval of the actions of insurance companies toward their examiners, and further that it determine the status of members that submit to a reduction of fees and further that it ask all local societies to prescribe the status of members who act in opposition to the views of the majority That this society use its influence collectively and individually, in behalf of all companies paying a straight $5 fee.

This report was accepted and adopted, and the delegates to the American Medical Association were instructed to use their best efforts to get a strong committee appointed from that body to take the matter up with the various life insurance companies and to secure a regular schedule of fees

Proprietaries and "Patent Medicines"

On motion of Dr Edward McGuire, Richmond, a committee was appointed to draft a bill requiring all proprietary preparations and "patent medicines" sold in the state to have printed on the label of the bottle or package their formula—this bill to be presented at the next session of the state legislature

Clinical Reports

Dr W S Gordon, Richmond, reported a case of myxedema in a child seventeen months old. The child was treated with thyroid extract (desiccated) in ½ gr doses and recovered.

Dr L G Pedigo, Leatherwood, mentioned a case in which a diagnosis of cholecystitis was made and where the clinical history was perfect On operation, it was found to be a case of chronic pancreatitis He called attention to this case as illustrating the difficulty of diagnosing disease of the pancreas

Dr I S Stone, Washington, D C, spoke of the great work that is being done by surgeons who explore the upper abdominal cavity in throwing light on these troubles He referred to two cases that illustrated the point brought out by Dr Pedigo He reminded the society that from one to five per cent of the cases of jaundice where the attacks are so much like those accompanying gallstone disease turn out to be cases of chronic pancreatitis

Dr Hugh M Taylor, Richmond, said that chronic pancreatitis must be much more common than it is thought to be on account of the intimate anatomic relationship of the gall bladder, intestines, and pancreas, and an infection involving one of these structures is very liable to affect the others

Dr Jacob Michaux, Richmond, reported a case of probable arrested development of the skin, in which epidermization was incomplete in symmetrical lines on opposite sides of the body These raw places healed in a short time under antiseptic dressings

Dr. W L. Robinson, Danville, reported a case of bowel obstruction in which the cecum and appendix were found in the scrotum Six inches of the bowel were resected, with recovery of the patient

Home and Office Treatment of Inebriety

Dr T D Crothers, Hartford, Conn, does not think that the seriousness of alcohol intoxication is recognized by the average practitioner Alcohol intoxication is a profound toxemia and paralysis, with coma, pressure on certain brain centers, and other grave pathological changes It is a question how often a person may become intoxicated and still live. One author says five hundred times, another one thousand, while a careful study of the subject shows that the majority of the inebriates seldom become intoxicated more than one hundred times

The treatment requires skill and study The first thing is to recognize and remove any causal agents, such as exhaustion from over work, bad hygienic surroundings, night work, etc In the acute stage, elimination is the important thing—salines, the hot pack, alternate hot and cold applications to the spine Along with this use nerve sedatives—sodium bromid, 50 to 100 grains at a time, and then wait for a day or two before giving more, lupulin, valerian, etc. The most important thing in the after treatment is to impress the patient with the fact that he has a disease which requires a long course of treatment, and treat him with tonics An aqueous solution of quassia, two ounces every hour, for a day or two before an expected spree, will destroy the crave for drink and even render it distasteful

The Modern Treatment of the Toxemia of Pregnancy

Dr John F Winn, Richmond, emphasized two points (1) The value of prophylaxis and elimination, (2) the importance of early, unremitting, and systematic medical supervision of every pregnant woman He accepts as the most plausible theory for the cause of this condition, a disturbance of nitrogenous metabolism because of the failure of the oxidizing capacity of the liver He believes also that enough evidence has been adduced to warrant the statement that the clinical manifestations of the toxic state, viz Hyperemesis gravidarum, eclampsia, and acute yellow atrophy are one and the same disease whose kidney lesions are secondary to the lesions in the liver, and whose danger signal is not so much the loss of urea as the excess of ammonia He is of the opinion that we should no longer trust wholly to the urinalyses as ordinarily made, but, in all cases of doubtful diagnosis, we should avail ourselves of the modern methods of a thoroughly equipped pathologist or chemist for determining the ammonia co efficient He regretted that too often there is an indifference to the dangers of pregnancy that is appalling and well nigh culpable He pleaded earnestly for a complete revolution in this regard, and urged that the most rigid prophylaxis be observed from the time pregnancy is suspected. He would make it obligatory on patients to report promptly the earliest symptoms of the toxic state They should be made to realize the importance of engaging and consulting their physician at the earliest period in pregnancy, and not to defer this duty until headache and edema develop Especially, would he advise earlier and more frequent urinalyses, and the more liberal drinking of water The treatment is elimination, special emphasis was placed on active purgation, and repeated and persistent colonic irrigation in large quantities The author advocates emptying the uterus by some safe and rapid method before it is too late, preferably by the Voorhees' hydrostatic bags, and manual dilatation

Medical Treatment of Gallstones.

Dr Chas S Webb, Bowling Green, gave his treatment as follows The patient is first given this prescription

℞	Chloroformi (pur)	ʒi	4
	Olei olivæ		
	Mucil. acaciæ, āā	℥ii	60

M Sig Two teaspoonsful every four hours After taking these doses for about forty eight hours, and after the patient has fasted ten or twelve hours, he gives

℞	Spts eth. comp	ʒi	4
	Olei olivæ	℥viii	240

at one dose The patient is then directed to lie on the right side with hips slightly elevated (about three or four inches) for one hour, then lie on the left side with hips elevated ten or twelve inches, the spinal column being kept as straight as possible so as to form the hypotenuse of a triangle This position, if possible, is kept for an hour and a half After three or four hours, a large dose of caster oil is given

Dr. Hugh M Taylor, Richmond, said that it is generally conceded that the large stone ulcerated either through the bladder into the intestines or through a sacculated duct He does not believe that there is any medical treatment for gall stones The medical treatment should be aimed at their prevention, but when once formed it is a question whether they should be interfered with, since according to statistics only 5 per cent of gallstones give trouble

Value of Hospitals as Educational Institutions

Dr Joseph Price, Philadelphia, emphasized the importance of small private hospitals because they save life in acute surgical cases where delay means death, they return to domestic life many people who are incapacitated for work by some trouble requiring a trivial operation, but who will not go to a distant hospital for operation though they would allow the work to be done at home The private hospital serves as an educational institution for the community physicians It enables the local physician to reap some of the benefit of modern advancement of surgery He urged that every county poor house have an operating room attached where the county society should hold clinics from the abun dant material always to be found there, for the benefit of its members

Dr Price called attention to the magnificent work that has been done by a number of small private hospitals that have come under his observation. He said that Virginia gave the pioneer in abdominal surgery, and also the third great private hospital and training school, polyclinic and postgraduate school (McGuire's, St Luke's), where young men serve their apprenticeship in good numbers and become prominent operators He said that all hospitals should be clinical schools That the visiting staff, surgeons, physicians and specialists should be compelled to teach the residents and community physicians That the residents throughout the country should be doubled and quadrupled, that all graduates may have a hospital apprenticeship The large clinics, or matinees, are a waste of valuable material

Treatment of Pleurisy and Empyema.

Dr W P Carr, Washington, D C, emphasized the importance of an early recognition and removal of fluid from the pleural cavity to prevent compression of the lung, the frequency of pleurisy as a complication of pneumonia, the remarkable success of simple drainage, which is the only indication in acute cases and which is indicated in chronic cases where the patient is not in condition to stand a more serious operation Dr Carr usually prefers to make the opening a little anterior to the mid axillary line, about the seventh rib, where there is little muscle over the rib and where it is convenient to get at for dressings The anterior opening drains just as well as one made posterior because pus never flows out of such a cavity by gravity, but is pushed out by the contracting walls of the chest The important thing is to have a large drainage tube through which pus and clots of lymph may be extruded It is not necessary to wash out the pleural cavity at first, but it may be done later with saline solution, followed by the antiseptic solutions

Uncinariasis.

Dr B B Bagby, Walkerton, called attention to the frequency of uncinariasis in Virginia He showed a number of specimens of the parasites and also two or three of his patients

Treatment of Cancer

Dr J Shelton Horsley, Richmond, called attention to the peculiar apathy of the medical profession to this disease, and attributed this apathy partly to the fact that the cause of cancer is still unknown, in spite of the work that has been done by numerous cancer commissions, and partly to the fact that the greater percentages of cures have been accomplished only after extensive and radical operations in the hands of skilled surgeons or specialists He urged the necessity of the surgeons having an accurate knowledge of the structure and macroscopic appearance of malignant growths, and does not think that it is well always to wait for the report of a pathologist because the incision of the growth in order to get a specimen for microscopic examination involves the danger of a rapid metastasis, and may make a later operation useless

In treating cancer, it is necessary to recognize the fact that all malignant growths are not of the same malignancy, and the agents that will destroy one may only stimulate another to greater activity, for the difference between destruction and stimulation is only one of degree For instance, chemicals or the *x* ray may remove a superficial epithelioma of the face while they would only cause increased activity in the case of a malignant growth of the breast These facts show the rich field that is open to the cancer quack while at the same time it shows the danger to which the victim is subjected, for the quack does not recognize the distinction above referred to Dr Horsley called attention to the catchy way the quacks have of advertising especially their guarantee to cure or refund the fee He says that the so called cancer hospital is nothing more than a third rate boarding house which at $5 per week would be run at a profit, whereas they charge $20 per week. At the end of three to six months, when they have been clearing more than $15 per week, it is not such liberality after all if they return the "fee" and tell the patient that he waited too late to come to them

VERMONT STATE MEDICAL SOCIETY

Ninety third Annual Meeting, held at Barre, Oct 11 12, 1906

The President, Dr M L Chandler, Barre, in the Chair

Officers Elected.

The following officers were elected President, Dr D C Hawley, Burlington, vice president, Dr C W Strobell, Rutland, secretary, Dr George H Gorham, Bellows Falls, treasurer, Dr B H Stone, Burlington, auditor, Dr John H Blodgett, Saxton's River, and delegate to the American Medical Association, Dr J Henry Jackson, Barre

The next annual meeting will be held at St Johnsbury in October, 1907

The society formally disapproved of contract practice

At the annual banquet, the governor and lieutenant governor and their wives were the guests of honor, and Dr Walter L Havens, Chester Depot, acted as toastmaster

Nephrolithiasis

Dr M L Chandler, Barre, in his presidential address, said that although nephrolithiasis frequently takes place in infants and small children it is not recognized Large calculi may form in the pelvis of the kidney and obstruct the mouth of the ureter and thus lead to hydronephrosis or pyonephrosis In some cases they require removal by surgical means They generally commence as uric acid or oxalate deposits In the male the differential diagnosis must be made between intestinal obstruction, floating kidney and gastric pain When pain is on the right side in the female the diagnosis is sometimes very difficult The pain may be due to gallstones, pleurisy, floating kidney, intestinal colic or obstruction, appendicitis, ovarian inflammation, uterine colic, lumbago, neuralgia, tubal pregnancy and aneurism

Treatment consists in hypodermic injections of morphia and atropia, hot applications locally and large warm enemata General treatment is dietetic and hygienic The patient should take large quantities of distilled water Alkaline mineral waters are good, except when the stone is phosphatic Benzoic acid and boric acid are good in the later cases A small amount of nitrogenous foods should be taken Eggs and milk are good, not so any food that is rich in lime It is very important to make frequent examinations of the urine

Treatment of Fractures

Dr E S Allbee, Bellows Falls, stated that he never operates on fractures of the skull unless there are symptoms of depression In fracture of the clavicle in children, strap a compress over seat of injury In adults use Dr Phelps' apparatus In Colles' fracture he advised the use of an anesthetic in all cases Use Carr's splint for adults and anterior and posterior splints for children He recommended Scudder's splint for fractured fingers and hands In compound fracture of the patella, wire together In closed fractures use long posterior pulp splint and strap a pad at the seat of injury In fractured condyle of the humerus put a hard compress over the seat of the injury and flex the arm at a right angle In fracture of the thigh use coaptation splints with weight and pulley In fracture of the neck of the femur use Hodgkin's splint In Pott's fracture apply adhesive plaster around the malleolus and then put on a plaster of Paris splint. In fracture of the upper part of the humerus put a compress in the axilla, and apply a light shoulder splint and coaptation splints Bandage together and put arm in sling

DISCUSSION

Dr. C M Campbell, Rochester, thought it better to use the sandbag and fracture box at first in fractures of the lower extremities, and passive motion early in fracture of the elbow joint

Dr J M. Allen, St Johnsbury, advised the use of an anesthetic in all cases of fracture of the long bones Put them up in the proper position at first and do not examine for a week

Dr C W Strobell Rutland, thought that Moore's method, with a slight modification gives the best results in Colles' fracture In these cases commence passive motion early, even the next day

Treatment of Chronic Cardiovascular Diseases.

Dr. Egbert Le Fevre, New York, showed conclusively that it is necessary for the physician to thoroughly understand the underlying causes of the disease. He should try and find out the cause of the increased blood pressure and the arteriosclerotic changes that are taking place in the blood vessels. He cautioned against indiscriminate use of vasomotor dilators and heart tonics.

DISCUSSION

Dr. J. N. Jenne, Burlington, spoke of the importance of understanding all the pathologic conditions involved. He cautioned physicians against the unlogical use of the nitrites in many diseases of the heart. Nearly all drugs, he said, are disappointing in cardiac incompetency.

Arteriosclerosis.

Dr. H. D. Arnold, Boston, said that it is very important to recognize the disease in the early stages, as it is very complex in its various manifestations. The clinician and pathologist do not agree as to whether renal disease is the cause or the effect of sclerosis of the blood vessels. The aorta and splanchnic arteries may be affected and the superficial vessels show no change. The four essential factors in blood pressure are the volume of the blood, the cardiac energy, the vasomotor contraction and the elasticity of the vessel walls. An increased blood pressure means more work on the heart, which leads to either hypertrophy or dilatation. The causes for increased blood pressure are toxic and nervous influences and excessive muscular work. The most important factor is toxic poisons from without, such as alcohol, tobacco and lead, imperfect metabolism, as in gout, diabetes and excessive ingestion of food, imperfect elimination. Syphilis is also a cause. The mental element is seen in the intense application, responsibilities and worries of modern business life. The same causes that affected the blood vessels may also cause changes in the heart and kidneys. It is very important to find out the cause of the high pressure in the first stages of the disease. The diet should be regulated. He said not to give vasodilators and advised the use of the sphygmomanometer to estimate the pressure. It is important to estimate the relation between the degree of blood pressure and the capacity of the heart for work.

The Care of Surgical Cases.

Dr. H. C. Tinkham, Burlington, thought that the evolution of surgery had been along the lines of antisepsis and asepsis. Text books say but little about the preparation of the patient or the after treatment, although of vital importance. Toxemic conditions may arise owing to faulty secretion and elimination due to the nervous system. Sedatives, like valerian and asafetida, and, if necessary, bromid may be given to insure good sleep. To empty the bowels give calomel for two days previous to operation, and, if necessary, salines and enemata. Give no food for eight hours previous to operation, although a cup of clear tea or coffee three hours previously is sometimes advisable. Put the patient in bed after the operation and surround the body with hot water bottles. Before the patient comes out from under the anesthetic use a high enema of hot normal salt solution and give a cup of water to clear out the stomach. After the patient has recovered from the anesthetic give calomel ½ grain to 1 grain, and repeat every two hours until from 3 to 6 grains have been taken. Twenty-four hours afterward give an enema of 2 ounces of glycerin to the quart of water. Hot water or weak tea only are to be given the first 24 hours. Give enough opium to keep the patient quiet. One-half grain codein, hypodermically, is the best and, if necessary, give morphia. Strychnia is indicated for a few days. Digitalin for weak heart. For shock give adrenalin chlorid. Rare beef, chops and chicken can be given in most cases in three or four days. Twenty-four hours after the operation the patient can be raised to a half sitting position.

Tetanus, with Special Reference to Fourth of July Injuries.

Dr. C. A. Pease, Burlington, showed that the severity of the wound has nothing to do with the development of tetanus. The bacilli are more prevalent in the summer, and the small pieces of dirty skin carried into the wound by the wad are the cause of the infection in injuries from blank cartridges. The toxin is one of the most powerful known, a very small quantity only being enough for infection. It acts on the motor cells of the cord, pons, medulla and cortex. The prognosis is unfavorable if the disease develops within nine days. In 1903 The Journal A. M. A. reported 415 cases of tetanus, with 406 deaths. In 1906 only 89 cases, with 75 deaths. There were many more cases of tetanus from blank cartridge wounds than from any other cause. He gave the results of his experiments on guinea pigs and rats with the powder and wads from blank cartridges, but only got a positive reaction in one case. The mortality in subacute cases treated with tetanus antitoxin is 43 per cent. and in acute cases 63 per cent. All wounds that are liable to be infected should be treated in the most antiseptic manner, and immunizing doses of at least 10 c.c. of tetanus antitoxin should be injected around the seat of injury.

DISCUSSION

Dr. A. L. Miner emphasized the importance of a thorough examination of the wound and to see that it is cleaned out to the very bottom.

Dr. S. E. Maynard, Burlington, advocated the use of peroxid of hydrogen as an antiseptic and giving 20 c.c. of antitoxin at first in all gunshot and penetrating wounds.

Dr. B. H. Stone, Burlington, stated that bichlorid will not destroy tetanus germs, but peroxid of hydrogen will.

Trichinosis.

Dr. C. H. Beecher, Burlington, gave a report of 23 cases that had come under his observation the past winter. Only about 900 cases have been reported in the United States in the past 45 years. The parasite, *Trichina spiralis*, has been found alive after 15 months in pickle. It resists a freezing temperature for two months, and sometimes a temperature as high as 180 F. has failed to kill the trichina. About 2 per cent. of all pork is infected. In 505 unselected cases of autopsies that had not died of trichinosis the parasite was found in 5 3 per cent. There is no constant relation between the number of trichinæ and the symptoms. The symptoms are divided into three stages, corresponding to the life of the parasite. 1. The stage of gastrointestinal irritation. 2. The stage of myositis. 3. The stage of subsidence. The first stage usually takes place within a few hours after the ingestion of the infected meat. Vomiting and diarrhea are favorable for the patient. The second stage takes place from a week to ten days after infection. Muscular pains and weakness are the prominent symptoms. The pain is rheumatic in character, and may affect the diaphragm, pharynx and larynx. Edema is very characteristic. Fever is usually present. Sweating is profuse. A marked leucocytosis is present. The increase in white cells may reach 30,000. Convalescence is slow. The mortality varies from 1 to 30 per cent. Involvement of respiratory muscles is very unfavorable. Must make the differential diagnosis of this disease between cholera morbus, ptomain poisoning, rheumatism and typhoid fever. Microscopic examination of the blood and muscle will clear up the case. All pork should be thoroughly cooked. Thorough salting and hot smoking will also kill the parasites. The treatment consists in washing out the stomach and colon with glycerin. Give purgatives, also glycerin, in dram doses, every hour. Hot baths are good for the relief of pain. Sustain the strength of the patient.

Nephritis.

Dr. W. H. Lane, Brattleboro, said that there is no trouble in making a diagnosis in acute Bright's disease with the edema and effusions into the serous cavities, increased blood pressure, scanty, high-colored urine, specific gravity 1025 or 1030, and albumin. The interstitial form begins very insidiously, but usually the first symptoms are swollen feet at night, and a tense and bounding pulse. By examination of the urine the diagnosis can be made. Large amount of acid urine, light colored, low specific gravity, albumin (small in amount), a few hyaline and pale granular casts. Later the urine lessens in quantity, casts and albumin are increased, there is some blood, the urea is diminished. There is slight edema about the ankles, hypertrophy of the left [illegible] of heart, without valvular disease [illegible] is [illegible] sting La[illegible] th[illegible] is palpitation, [illegible] tly develops

Complications and Sequelæ of Nephritis

DR. J H BLODGETT, Saxtons River, said that bronchitis and pneumonia are frequent complications, the latter occurring after ether administration Changes always occur in the blood vessels, Bright's disease being one of the chief causes of miliary aneurism and cerebral hemorrhage in persons between 30 and 40 Anemia, sometimes the pernicious form, may be one of the complications Uremia is one of the most important complications The direct cause of this condition is still unknown, although it is thought to be the toxic action of a variety of nitrogenous metabolic products retained in the system In this condition we get the cerebral symptoms, mania, convulsions, coma and palsies Uremic dyspnea and gastrointestinal symptoms may be present

Treatment of Nephritis

DR. S W HAMMOND, Rutland, emphasized the importance of hygienic and dietetic treatment as well as of the medicinal Patients should lead a quiet, tranquil life and, if possible, should avoid the cold, stormy weather of the North Daily warm baths are beneficial Chlorid of sodium is injurious, also all forms of alcohol. Milk is usually well borne and should be given in quite large quantities, so, too, stale bread, fruits and even eggs If the urine is small in quantity, give the citrate or acetate of potash, or infusion of digitalis If there is a small amount of urea excreted, make the skin and bowels do the work of the kidneys The nitrates are beneficial in the chronic interstitial form In gouty and syphilitic subjects give the iodids Kidney decapsulation is still in the experimental stage The results thus far achieved in this line of treatment have not been flattering

Commercial Therapeutics and Commercial Therapeutists.

DR GEORGE L. BATES, Morrisville, mentioned as of special interest to the physician the question of professional ethics, of life insurance fees and the proprietary medicine and nostrum evils He felt that the latter is the cause of the ruin, physically, mentally and morally of more people than is realized It is the prime factor in the production of many diseases, and it helps to increase the death rate yearly It is a curse on the nation on account of the hundreds of morphin, cocain and alcohol inebriates it has developed. He commended in the highest terms the work that the Council on Pharmacy and Chemistry of the American Medical Association is doing for the physicians, the druggists and the public. He said it is much better for the physician to depend on his own knowledge than to rely on the ready made prescriptions sent out by the drug houses

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DELAWARE STATE MEDICAL SOCIETY

Annual Meeting, held at Wilmington, Oct 9 11, 1906

The President, DR. JOHN PALMER, JR., Wilmington, in the Chair

Urges Higher Standard of Education.

HON LEVIN I HANDY gave the address of welcome He referred to the spirit of jealousy that had in times past existed between the members of the profession, and believed that closer association would tend to remove this jealousy and cultivate the *esprit du corps* so much to be desired among the profession He favored the adoption of the laws now being urged by the society and the profession throughout the state for the raising of the standard of the preliminary education of the physician, and also advocated the adoption of a four years' course in a medical school, which is required by all the surounding states, believing that unless this is done Delaware will be receiving the rejected from the neighboring states

President's Address

DR. JOHN PALMER, JR., Wilmington, reviewed the progress of medicine, the establishment of schools, hospitals etc., and urged the necessity for organization He said that the society should endeavor to enroll every eligible physician in its ranks He stated that there is a tendency to give less medicine and to improve the sanitary conditions He also dwelt on the antitoxins and similar agents He deprecated the use of headache powders and other "patent medicines"

Early Diagnosis of Tuberculosis.

DR A. ROBIN, Wilmington, said that until recently this condition has been regarded as a fatal disease. Ninety per cent. of all autopsies reveal healed lesions of tuberculosis, and in many cases the disease, he said, could be cured, if taken in the incipient stage He particularly emphasized the importance of early diagnosis The susceptibility varies with the individual and has much to do with the nutritional power of the patient The curability depends largely on the stage of the disease, and the treatment should be directed toward increasing the individual's resistance, careful regulation of the diet and mode of life being essential factors There may be a predisposition to the disease, and it may be based on anatomical or physiological defects The most valuable diagnostic signs are rise of temperature in the afternoon, loss of appetite and weight, weakness, dyspnea on exertion, and in the absence of sufficient of these to warrant a diagnosis, the tuberculin test may be resorted to Microscopic examination frequently will not show the tubercle bacilli until late in the disease, and, while the tuberculin test is difficult of application in private practice, it is generally reliable.

DISCUSSION

DR. PETER W TOMLINSON, Wilmington, stated that if tuberculosis could always be recognized in its incipiency it would be well to advise the patient to pursue that life which is demanded for the betterment of his condition, and that, even in cases of doubt, it is, perhaps, better to give the patient the benefit of the doubt and advise such measures He believes that more depends on proper nourishment, fresh air and hygienic measures than on drugs

DR PHILIP MARVEL, Atlantic City, N J, referred to the necessity for more thorough primary physical examinations, in suspected cases, or even in cases of doubt, repeated at short intervals, in order to determine the presence or absence of the disease in its incipiency, when treatment will be of the most avail In regard to tuberculin, he stated that there is a feeling against its use, and that, while there must be a certain amount of experimental work in order to establish a diagnosis, yet the public desire as little as possible

Some Remarks on Gastric Ulcer

DR. H. A. CLEAVER, Wilmington, stated that there are few diseases of the gastric tract that exceed in importance gastric ulcer Social history, occupation, climate or nationality seem to have but little influence, although there does seem to be a slight predisposing influence among workers in glass, metal and porcelain The pyloric region is thought to be the most susceptible to this condition, and among the predisposing factors are embolism, thrombosis, venous stasis, interstitial hemorrhage, ecchymosis of the gastric mucosa, etc. He discussed as causative factors the infectious diseases, such as typhoid, puerperal fever, etc, and also the theory of its causation by digestion, being due to the diminution of resistance in the walls of the stomach or increase in the digestive activity of the gastric juice The differential diagnosis between gastric ulcer and carcinoma, erosion, duodenal ulcer, hysteria, gall stone colic, etc., was discussed in detail He contrasted the various kinds of medical treatment with the operative procedures of pyloroplasty and gastroenterostomy

The Necessity for Careful and Accurate Diagnosis

DR E S DWIGHT, Smyrna, deprecated the practice of jumping at conclusions, or the too frequent diagnosis of a disease which happens to be the practitioner's particular hobby Vague terms should not be employed, but the physician, after a thorough examination, should decide definitely on the conditions present Urinalysis, and examination of the vagina and rectum should, whenever necessary, be resorted to, and he believes that they are very valuable assistants in many cases

Anesthesia With Report of Five Hundred Cases.

DR. HAROLD L SPRINGER, Wilmington, stated that age seems to make but little difference, with the exception that it is more favorable in persons under fifty Ether was used in 88 per cent of the cases, and chloroform in the remaining 12 per cent., 2 per cent of the former being started with chloroform. The average amount of ether administered was 2½ ounces, the average time under ether was 15 minutes, vomiting occurred in 25 per cent of the cases He believed that the vomiting was due to the direct action of the ether on the stomach, as it did not occur when the anesthesia was produced by chloroform Oxygen was necessary in 4 per cent of the cases, and the return to consciousness was more rapid in these cases than where no oxygen was employed He believes that the use of oxygen with any anesthetic eliminates a large percentage of the danger Seventy five per cent of the anesthesias were for major operations, no patient died from the effects of the anesthetic, and most of the fatal cases were *in extremis* when the patient was placed on the table Urinary examination was made both before and after the anesthesia Chloroform, he stated, is more dangerous than ether, especially in the hands of the inexperienced In all cases, there should be a thorough examination of the heart, lungs and kidneys prior to operation, and in cases of threatened death artificial respiration should be resorted to

Newspaper Advertisements.

Resolutions deprecating the fact that the newspapers permitted the advertisement of irregular physicians and quack remedies were taken up, and it was decided that the secretary should communicate with the various newspapers, calling their attention to the improper publications and asking their discontinuence

DR EMERY MARVEL, Atlantic City, N J, referred to the action of the New Jersey State Medical Society in reference to the use of nostrums, and stated that the action of the lay papers, particularly *Collier's Weekly* and the *Ladies' Home Journal*, in exposing these remedies have been productive of good results He recommended that the Delaware State Medical Society express its feeling in regard to this matter

He also referred to the matter of life insurance examination fees, which were discussed at the last meeting of the New Jersey State Medical Society, and the unanimous consensus of opinion seemed to be that examinations would not be made for such small fees as are now being paid. He also referred to and strongly condemned contract practice.

Requirements for Licensure to Be Raised.

The society then endorsed a bill to be presented to the next session of the legislature, increasing the standard of requirements for a license to practice medicine, and instructed the secretary to communicate with the members, urging them to elect members favorable to the proposed law

The work of the Delaware Tuberculosis Society was endorsed

Officers Elected.

The following officers were elected President, Dr John W Clifton, Smyrna, vice presidents, Dr Frank L. Springer, Newport, and Dr Luther S Conwell, Camden, secretary, Dr George W K. Forrest, Camden, treasurer, Dr William G Winner, Wilmington

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulæ and outlines of treatment are answered in these columns.]

Burns.

The treatment of burns, according to Prager, in the *N Y Med Jour*, may be divided into the local and general treatment

LOCAL TREATMENT

The indications are 1 To overcome the shock and to relieve the pain 2 To guard against congestion and inflammation of internal organs 3 To prevent sepsis from the absorption of the toxins of the sloughing tissue 4 To counteract the exhaustion incident to such suppuration In the treatment of burns of the first degree the author recommends some application which will tend to soothe the injured part For this purpose olive oil or linimentum calcis (Carron oil, a mixture of linseed oil and lime water), serves a good purpose.

The best and simplest remedy, according to Prager, in the treatment of burns of the first degree is powdered sodium bicarbonate dusted freely over the surface of the wound. It is well to exclude the air in all cases by the application of a protective dressing

As an emergency dressing in burns of even the second degree, ordinary molasses is recommended, which is best applied by soaking pieces of blotting paper one half inch by two inches in the molasses and laying them evenly on the surface They must overlap each other, and when sufficiently dry they serve as an excellent covering Sodium bicarbonate may be added to this dressing by dusting over the surface after the dressing has been applied The sugar in the molasses, according to Prager, serves as an excellent antiseptic. When vesication is present with inflammation of the skin with the formation of bullæ, strict asepsis must be employed These vesicles must be punctured at the base, drained of their contents as the serum is irritating in character The cuticle, however, should not be removed, as it serves as a protection The area should be thoroughly cleansed with a bichlorid solution from 1 10,000 to 1 20,000, and after such cleansing it should be covered by sterilized rubber tissue over which gauze and bandage are applied. The dressing should be changed only once in every two or three days unless the odor is distinct or the discharge great

When the area is extensive and is of the second or third degree, the author commends very highly the value of a continuous hot bath at a temperature of 100 F, and kept at such temperature for several days It gives almost instant relief to the sufferer by protecting the surface from the air and prevents decomposition

In the treatment of lesions of the third degree which are local in extent, the area should first be thoroughly disinfected with a 1 2,000 bichlorid solution or a 1-40 carbolic acid solution, and at the same time all the necrosed tissue should be removed This procedure, according to this author, will have to be carried out under an anesthetic. An antiseptic powder in burns of such a degree is preferable to ointments as a dressing, as it has greater power to prevent suppuration

For this purpose he recommends the following combination

℞	Iodoformi	ʒi	4
	Acidi borici	ʒvii	28

M Sig Apply locally over the area involved

This powder can not be used over extensive surfaces for fear of iodoform poisoning, especially in cases of young children In addition, the author recommends zinc oxid or bismuth as of value as a local dusting powder

In the treatment of *x* ray burns the lesion must be kept clean, and all dressings must be thoroughly aseptic, as the weakened condition of the adjoining areas renders these cases much more susceptible to infection He recommends in these cases an application of a 1 per cent watery solution of picric acid which lessens the pain and assists in healing In severer cases the treatment should be along the lines of ordinary burns

Leweson, in the same periodical, recommends the ordinary lead and opium lotion as a local application in burns of the first degree In more extensive burns he recommends a solution of aluminum acetate which is very cooling, antiseptic and astringent in its action This may be used in strength of 6 per cent., applied on gauze and kept moist in order to prevent the gauze from adhering After applying this solution for 24 hours a powder should replace it as a dressing For this purpose Leweson recommends the following

℞	Zinci oxidi	ʒii	8
	Bismuthi subnit.	ʒiv	15
	Lycopodii	ʒi	4

M. Sig To be [illegible] freely

In burns of the second degree he recommends the linimentum calcis (Carron oil), and after from 24 to 36 hours changing to the boric acid ointment, which should be applied until the upper layer is repaired, to be followed by the application of the foregoing dusting powder or bismuth subgallate

In burns of the third degree the wounds must be treated as any ordinary wounds Wet dressings of saturated solution of boric acid are useful If sloughing is present the wounds should be trimmed, and if stimulation is necessary to hasten healing, the author recommends a dressing of balsam of Peru around the edges as follows

℞	Balsami Peruviani	ʒi	4	
	Olei ricini	ʒv	20	

M Sig Apply locally along the edges of the burns

If the wounds are clean he recommends the use of silver foil, covering the area completely and in some cases skin grafting must be resorted to

T P Dale, in the same periodical, states that the important things to keep in mind in the treatment of burns are 1, The relief of pain, 2, absolute cleanliness, 3, the promotion of healing

In severe cases a hypodermic of morphin may be necessary to relieve the pain, and after the initial shock the following combination will, as a rule, be sufficient to give relief

℞	Chloralis hydratis	gr x		65
	Sodii bromidi	gr xx xxx	1	30 2

M. Sig To be given at one dose and repeated every three hours in water until relief is obtained.

In some cases a general anesthetic may have to be given on account of the pain Usually a hypodermic injection of morphin administered 15 minutes before the time for dressing will suffice

In order to preserve cleanliness moist applications must be applied. The following is recommended for this purpose, the aluminum acetate solution made up as follows

℞	Plumbi acetatis	℥ss	15	
	Aquæ q s			

And

℞	Alumini sulph.	ʒi	4	
	Aquæ q s			

M and add to the lead solution Sig Pour off the solution from the precipitate and apply to the burn on antiseptic dressings

A saturated solution of boric acid may be substituted for the foregoing, applied lukewarm, and keeping the dressings constantly moist

Dale recommends that the wound be cleansed daily with a 50 per cent solution of hydrogen peroxid to aid in the removal of any secretions, to be followed by the application of moist dressings

To promote healing, when the granular surfaces are fairly healthy he recommends an astringent ointment as follows

℞	Zinci oxidi	ʒi	4	
	Petrolati liq q s ad	℥i	30	

M Fiat unguentum Sig Apply locally to the part involved

The following combination is also recommended as a similar dressing

℞	Ichthyoli	ʒi	4	
	Zinci oxidi			
	Petrolati liq , āā	ʒiv	16	

M Fiat unguentum Sig Apply locally

CONSTITUTIONAL TREATMENT

In severe cases Prager states that stimulants may have to be administered, such as strychnin gr 1/30, every four hours, or alcohol and ether given hypodermically Leweson advises aromatic spirits of ammonia, alcohol in some form, strong coffee, attention to elimination, and the application of heat

Administration of Lupulin.

As a substitute for opium, which is contraindicated in the treatment of enteralgia on account of the constipation it is liable to produce, Stern in the *Medical Record*, recommends the employment of lupulin in the treatment of colicky pains In mild cases he recommends the following combination

℞	Lupulini	gr iiss		15
	Acetanilidi	gr iss		09

M Fiat capsula No i Sig Three such capsules every three hours Or

℞	Lupulini	gr xl	2	65
	Hyoscyaminæ salicylatis	gr 1/100		0006

M. Fiat capsulæ No xx Sig One capsule every three or four hours

In nervous individuals suffering from severe attacks of enteralgia the following combination is recommended

℞	Lupulini	gr iv		25
	Codeinæ sulph	gr 1/6		01
	Atropinæ sulph	gr 1/200		0003

M. Fiat capsulæ No xx Sig One capsule every hour if necessary

In cases of nervous diarrhea the following combinations are advised

℞	Lupulini			
	Strontii bromidi, āā	gr iiss		15

M. Ft capsula No i Sig Two such capsules three to five times a day Or

℞	Lupulini	gr v		30
	Pulv ipecacuanhæ	gr 1/3		02

M Fiat capsula No i Sig One such capsule four to six times a day

In order to lessen tenesmus and decrease the pain the following combination is recommended

℞	Argenti iodidi	gr iii		20
	Pulv belladonnæ fol	gr iss		09
	Lupulini	gr xv	1	

M Ft suppos No x Sig One suppository at bedtime and, if necessary, one also at midday, to be inserted as high up in the rectum as possible

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Medicolegal

Malpractice and Aggravation of Damages in Injury Cases.

The Supreme Court of Minnesota says, in the personal injury case of Viou vs Brooks Scanlon Lumber Company, that the mere fact that injuries caused by the negligence of the person sought to be charged have been increased by the negligence of an attending physician does not relieve that person of consequent liability The defendant and the physician in such a case are not joint tort feasors (wrongdoers), there is concert neither in project nor in action between them Each is individually liable Their several liabilities do not prevent recovery from either or both, although they may necessitate separate proceedings to enforce the injured person's right to sue Indeed, there are authorities which hold that the injured person may recover from the negligent defendant the full amount of his actual damages, although they may have been aggravated by the malpractice of the physician whom he employed, and whose directions he followed in the exercise of due care The court, however, finds it unnecessary in this case to pass on the correctness of this rule, but it holds that the fact that, before suit is brought against the negligent defendant, the injured person settles a claim against his attending physician for malpractice does not operate to relieve the party originally guilty of negligence of liability

In this case the plaintiff had a tram car fall on him, striking him across the back and hip He settled a claim for malpractice by the physician who treated his injuries caused by the defendant's negligence for $242 40 The judge charged the jury "The plaintiff having settled with his attending physician for alleged improper treatment, he can not recover of the defendant for any aggravation of damage caused by the doctor's improper treatment The plaintiff can only recover such damages as proximately result from the defendant's negligence aside from any aggravation of damages caused by the negligence of the attending physician For any condition from which the plaintiff is now suffering and which is to be referred to improper treatment by his attending physician, he has received satisfaction and he can not recover of this defendant therefor" A verdict of $12,500 was reduced by the trial court to $8,500, which was accepted by the plaintiff. The Supreme Court holds that the charge quoted contained no just ground of complaint by the defendant, and that the final award of damages was not excessive nor void, because the plaintiff did not bear the burden of tracing his damages to the defendant as their proximate cause.

Nor was the verdict void because it rested on mere conjecture. The difficulty of eliminating from the aggregate damages that part which is due to the malpractice of the physician is admittedly great, but it is not greater than occurs, for example, in actions against joint tort feasors. Nor is it greater than is involved in more nearly analogous cases of aggravated damages, as where the plaintiff was guilty of negligence in failing to exercise due care in securing medical or surgical aid (Louisville, etc. R. Co vs Falvey, 104 Ind 409), or as where he has negligently failed to comply with the directions of his attending physician (Keyes vs Cedar Falls, 107 Iowa, 509), or as where his own negligence generally has increased his damages (C & E. R. R. Co vs Meech, 163 Ill. 305, Fullerton vs Fordyce, 144 Mo 519, Plummer vs City, 79 Mo App 439, Throckmorton vs M. K. & T Ry Co, 14 Tex. Civ App 222), and see Strudgeon vs Village, 107 Mich. 496. In all these cases cited there has been allowed recovery of damages of which the defendant was the proximate cause, excluding the aggravation of damages due to negligence of the plaintiff. It is inevitable that the determination of damages in all cases of personal injuries is indefinite and unsatisfactory. In no such case is a mathematical calculation possible. The matter must rest largely in the exercise of good judgment by the jury and of the sound discretion of the courts. The result is as close an approximation to justice as is permitted by our system of jurisprudence. The charge was within the spirit of the authorities cited and of the authorities on the general subject.

Points About Law Relative to Vaccination

The Supreme Court of Pennsylvania, speaking through Chief Justice Mitchell, says that the substantial question in the case of Stull vs Reber and others, was whether the act of 1895 requiring the exclusion from the public schools of children who have not been vaccinated, is a valid exercise of the police power of the state. It has been twice so decided by this court. In Duffield vs School District of Williamsport, 162 Pa 476, a similar regulation, not even enacted by the legislature, but enforced by the school directors under an ordinance of the city of Williamsport, was held valid. And in Field vs Robinson, 198 Pa. 638, this very statute was held constitutional. However, it appeared to be thought that because the decision was given in a brief opinion "per curiam" (by the court) the subject was not fully considered. But the proper inference is precisely the reverse, that the conclusion was so perfectly clear to the whole court that it did not require any extended argumentative support. After these two decisions the question ought to have been considered as closed.

The terms of the act applying expressly to the "several municipalities" of the state, it was argued that they did not include school districts in townships and, therefore, made an unwarranted distinction in regard to such districts. But the separate classification of school districts in cities and boroughs with reference to public health where population is dense and the danger of contagion great would not be unconstitutional. However, this act is in no proper sense a regulation of school districts. What bearing it has on schools and school districts is altogether incidental to them as constituents of the community. The constitutional restrictions on special legislation apply to direct legislation, not to the incidental operation of the statutes constitutional in themselves on other subjects than those with which they directly deal.

As to the contention that the constitutional provision requiring the maintenance of an efficient system of public schools wherein all children above the age of 6 years may be educated is violated, it is sufficient to say that this article, like all others, must be construed and applied in connection with other fundamental governmental powers. The schools and school children, important as they are, are only fractions of the community and the police power of the commonwealth in the preservation of the public health must if necessity arises sacrifice the less to the greater interest. Salus populi suprema lex (the welfare of the people is the supreme law). If a child manifestly suffering from smallpox in its contagious state should be excluded from school, it is hardly conceivable that the propriety of such action should be questioned. At what period before or after the outbreak of the disease the right of exclusion should arise is a legislative, not a judicial question.

Nor does the court think that sections 11 and 12 of the act, which act is entitled "for the more effectual protection of the public health in the several municipalities of the commonwealth," should be read together, and the right under section 12 to exclude unvaccinated children be confined to the schools in the districts mentioned in section 11, namely, those in which smallpox is actually prevalent. There was a finding in this case that there was not, and had not been for a period of about 40 years, any person in the borough, or within many miles thereof, suffering from smallpox (variola or varioloid). It was argued that this feature distinguished the case from those before decided by this court. But the court thinks that the legislature may well have had in mind that the good fortune of such a community may not continue indefinitely. Immunity for 40 years in the past affords no guaranty of immunity for even 40 days in the future if a chance visitor from an infected locality or a borough resident returning from a visit to such locality, should bring with him the germs of infection. Section 12 is precautionary and preventive, and it is an old and sound maxim that an ounce of prevention is worth a pound of cure.

There is one hardship in section 12 that may deserve consideration with a view to possible remedy. The court below found as a fact "that occasionally it is beyond the power of children of school age as well as adults, to be vaccinated, although they may not previously have had smallpox nor previously been vaccinated, that even repeated attempts to perform the operation of vaccination on such children or adults is without effect, and vaccination will not take. In such cases vaccination is not successful and a physician can not certify that such child or adult has been successfully vaccinated." The health authorities, state or local, might well consider whether they have power to make a regulation as to what should be deemed a successful vaccination or its equivalent, whether the ratio of such immune children is of sufficient importance to justify the exercise of such power if possessed, and whether such regulation would be undesirable as affording opportunity for the evasion of the statute. The latter, however, are medical and administrative, rather than judicial, questions.

Lastly, it was argued that, construing section 12 as the court has done, it authorizes a trespass on the reserved rights of the individual which are beyond the reach of even the police power. Vaccination, it was said, is the infliction of a disease, cowpox, on the subject, and if that can be done irrespective of his consent, then the next step may be to require submission to inoculation with antitoxin or serum for diphtheria, tuberculosis, cancer, etc. But it will be time enough to consider such matters when they arise. At present the vast preponderance of opinion among intelligent and educated people under the guidance of the best medical authority, is that vaccination is a highly useful ameliorative if not always a preventive of one of the greatest scourges that have in past times afflicted humanity, and that the regulation of it by statute is not only a justifiable but a wise and beneficent exertion of the police power over the public health. When the legislature goes beyond that into new or more debatable fields, it will be time enough to consider the limits of its power.

One expression of the court below, and in some of the cases cited in the argument, requires a passing note. The act is not a penal statute. It is a broad, general act relating to the health of the whole population of the commonwealth. It is not, therefore, to be construed or administered by the rigid technical rules applicable to penal laws but fairly according to its intent, neither narrowing it to the letter to the exclusion of cases clearly within such intent nor stretching it beyond its legitimate scope to cover matters not clearly meant to its intent, [illegible] it to the [illegible] to the exclu[illegible] rights and [illegible] fore [illegible] a common sense.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York.

November 3

1 *The X ray in the Study of Congenital Malformations J W Pryor Lexington, Ky
2 *Importance of the Treatment of Chronic Otorrhea. S Oppenheimer, New York.
3 *Suppression of Tuberculosis J B Nichols, Washington D C
4 *Enucleation, Some Uncalled for Disfiguring Operations Resulting from Failure to Recognize Accessory Sinus Disease H M Fish, New York.
5 *Contractures and Muscular Atrophy G Norström New York.
6 When is "Early' in Operating for Appendicitis? A. M Pond Dubuque, Iowa.
7 *Modern Treatment of Intracapsular Fractures. W L Hunt, Bangor, Me
8 *Method of Operating on the Lip C F Buckley, Brooklyn, N Y

1 **X-Ray in Study of Congenital Malformations**—Pryor declares that it would be difficult to estimate the value of the x ray as a means of diagnosis This method is particularly useful in the case of bone injuries, and in congenital malformations it is the only positive means of making an exact anatomic diagnosis He has examined two cases of polydactylism

2 **Importance of Treatment of Chronic Otorrhea.**—Oppenheimer states that destruction of the mastoid interior is by far the most frequent result of untreated otorrhea A not uncommon result is phlebitis and thrombosis of the smaller veins related to the diseased parts Either the large venous channels, such as the sigmoid sinus or the jugular vein lower down in the neck, may become the seat of purulent thrombosis Again, the brain tissue with its covering and blood vessels is often affected. Caries and necrosis of the ossicles or temporal bone are present in the larger number of cases of chronic aural suppuration which have not received proper care The walls of the tympanic cavity, especially of the attical regions, may become involved The general health of the individual is usually below par

3 **Suppression of Tuberculosis.**—Nichols declares that the maintenance of sanatoriums accomplishes results along the line of quarantine Proper care and disposal of the sputa should be rigidly and universally practiced and enforced Another means of preventing access of the bacilli consists in the control of milk and food supply As to the efficacy of the registration and allied measures the final criterion must rest on the results of actual trial. Both the health department and practicing physicians have had a part in the reduction of the tuberculosis death rate The task of stamping out tuberculosis, however, offers enormous difficulties

4 **Results of Failure to Recognize Accessory Sinus Disease**—Fish declares that were the ophthalmologist to regard a retro ocular edema, the involvement of an external muscle, a sluggish pupil, and an idiopathic inflammatory condition about the orbit or within the globe as a symptom of disease of the accessory sinuses, unfortunate enucleations might be avoided, and in many instances the function of the eye be preserved. Fish cites the history of several cases in which failure to recognize accessory sinus disease resulted in the unnecessary disfiguring operation of enucleation

5 **Contractures and Muscular Atrophy**—Norström attributes most of his success in the treatment of muscular atrophy to massage

7 **Treatment of Intracapsular Fractures.**—Hunt reports three cases of intracapsular fracture, in which the Maxwell method of treatment was practiced. By this method a severe injury is turned into a milder one that is not usually fatal, except in the very debilitated The treatment consists in the old downward extension with adhesive straps with side traction at the groin, carrying a pull upward, outward and forward This takes up the weight of the thigh to a certain extent, holds it opposite the point of fracture, and draws the capsule like a tight sleeve over the fragments, holding them in place

8 **Method of Operating on Lip**—Buckley illustrates his method by a diagram It is especially useful in cases in which local anesthesia is employed for the removal from the lip of benign growths or of those which are malignant without glandular involvement A pair of Murphy intestinal anastomosis clamps, with their blades sheathed in rubber tubing to protect the engaged skin and mucous membrane, are employed. The edges of these clamps are placed about three eighths of an inch from the line of proposed incision After the anesthetic is injected, the growth is excised. Sutures are inserted, the clamps are removed and the dressing is applied In this operation no assistant is required

New York Medical Journal.

November 3

9 The Scientific Foundation of Modern Treatment of Disease. J V Shoemaker Philadelphia.
10 Plea for Conservatism in Electrotherapeutics, with Remarks on Dosage. A D Rockwell, New York.
11 *Rational Treatment of Chronic Constipation D H Murray, Syracuse, N Y
12 *Two Unusual Cases of Varix. De W Stetten, New York
13 Four Cases of Chronic Atrophic Paralysis W W Lesem, New York.
14 Case of Ruptured Tubal Gestation Sac, with Secondary Attachment of the Ovum to the Cecum. W H Wells Philadelphia.
15 Use of the Cold Wire Snare in the Removal of Faucial Tonsils H P Moseley, New York
16 *Possible Dissemination of Tubercle Bacilli by Insects S E Weber Lancaster Pa
17 Artificial Cycloplegia in Errors of Refraction. M L. Benoit, New York.

11 **Treatment of Chronic Constipation**—When operations do not cure and when surgical procedures are unnecessary, Murray employs the following treatment, which is given every fourth day The patient is placed in the Sims position, an electrode after the pattern of Ewald with a perforated soft rubber shield is passed into the sigmoid. The rectal electrode is connected from its binding post to the positive pole of the battery, and rubber tubing connects it also with an irrigator, filled with normal saline solution, which is elevated about three and a half feet above the patient. The rapidity of the flow of normal saline is controlled by a stop cock in the electrode The negative electrode is made of sheet lead large enough to cover the abdomen, and is well padded with a towel wrung out of hot normal saline solution The electric saline douche washes all fecal débris and mucus from the intestinal mucosa, leaving a clean surface for medication.

This part of the treatment occupies from ten to twelve minutes, and from 30 to 64 ounces of normal saline solution is thrown into the sigmoid and descending colon The patient is then allowed to go to the toilet, where a free evacuation takes place, leaving the intestinal mucosa clean After this the patient returns to the table for the last half of the treatment This consists in throwing one ounce of an emulsion of olive oil (1 pint), iodoform (1 dram), bismuth subnitrate (2 ounces) into the descending colon through a Wales bougie or a special tube which Murray has devised. This is followed by from one to two ounces of some dilute astringent or antiseptic solution of hydrastis The iodoform is omitted from the emulsion if the patient has an idiosyncrasy that would make its use inadvisable. After throwing the medicament into the sigmoid, the patient is kept for about ten minutes on the table, which is so tipped that the hips are elevated considerably, allowing the emulsion to gravitate high up in the colon

When this treatment is begun, patients are ordered to stop the use of all laxatives They are instructed to go to the toilet at a regular hour each day and to make an honest effort to stool, taking 15 or 20 minutes, if necessary, using gentle pressure, but never to strain Failing in this, the patient is directed to use an enema of plain water or normal saline in order that the bowel may be educated to empty itself at a regular time While under this treatment patients are allowed liberal diet Excess of pastry, confections and condiments are prohibited, and they are directed to drink at least six glasses of water daily

12 **Unusual Cases of Varix**—The first case reported by Stettan is one of progressive phlebectasis of the lower extremity which had existed since birth The development of painful and sensitive purpuric spots and edema of the ankle, with slight interference in walking were the main symptoms at first Later, the patient suffered considerably from the forma-

tion of painful thrombi in the dilated veins The second case was one of obliterating endophlebitis secondary to typhoid

16 **Dissemination of Tubercle Bacilli by Insects**—Weber is convinced that tubercle bacilli after being expelled from the respiratory tract of a cow through the act of coughing may be disseminated by insects, especially the *Clothilla ocellorra* In a series of microscopic examinations of the contents of the stomach and alimentary canal of these insects Weber confirmed his suspicions by finding a specimen harboring the tubercle bacilli The discovery was made only after patient search through some 3,000 specimens which were taken from mangers, feed chests and other surroundings where tuberculosis was present in cows Weber says

> As an example in the transmission in bacteria, let us watch the manger of a tuberculous cow depositing sputum containing tubercle bacilli mixed with meal, and drying on the woodwork about her stall Now if a swarm of these insects comes along what happens? They are voracious feeders, and in a remarkably short time will chew up and fill their stomachs with the crusted admixture of saliva, sputum and meal attached to the troughs and other surroundings, as the case may be. These insects are very shy and run very rapidly if disturbed, and may be followed to the farthest corner of the barn or even to the haymow and granary above it in a very few minutes They are extremely delicate and may be easily crushed, which occurs in the hay and other feed. By that means the contents of their stomachs may be conveyed to other animals. If such ingestion of contaminated material happens to be about the time of hibernation the danger is much increased, for then we find them in the hay by myriads and also in straw At this period they may also be found in the stem of timothy and in clover heads, where they are protected from losing their resting place by handling of the hay I have found the species of the genus *Clothilla* (Westwood) and *Lepinotus inquilinus* (Hayden) common in all kinds of buildings, but less abundant in the stables of cities than in the country barn.

Boston Medical and Surgical Journal.

November 1.

18 The Growth of Truth as Illustrated in the Discovery of the Circulation of the Blood. W Osler Oxford.
19 *Classical Symptoms of Hysteria. P Janet.
20 *Flexible Balancing Shoes. L R G Crandon Boston
21 *Epidemic Cerebrospinal Meningitis. E. L. Hunt, Worcester, Mass.

19 **Classical Symptoms of Hysteria**—In this paper Janet discusses the fugues or ambulatory automatisms, and the polyideic somnambulism, the double personalities, and the fits, sleep states and artificial somnambulisms

20 **Flexible Balancing Shoes**—Crandon makes a plea for wiser shoeing, to establish a method of shoeing which will allow free and natural foot action. Such a shoe should be flexible The crutch or splint effect must be eliminated. The shank of the shoe should be of leather only This flexibility, he says, allows the foot to accommodate itself to uneven surfaces, and gives freedom to plantar motion, which is desired. Fixed planes in the shoe should be abolished. The shoes should always be low cut to allow free ankle movement. Crandon places main dependence for reform and foot education on barefoot walking in the grass, barefoot toe and heel exercises morning and night, exercises of grasping action with bare feet in the air, and passive motion and massage to restore flexibility For the patient who is not carrying too much weight for his muscles, for the patient who has potentiality left in foot and calf muscles, this treatment suffices

21 **Epidemic Cerebrospinal Meningitis**—The results of Hunt's study are summarized as follows 1 The *Diplococcus intracellularis meningitidis* of Weichselbaum is the essential etiologic factor in epidemic cerebrospinal meningitis 2 The diagnosis may be made positively in nearly all cases by the examination of the spinal fluid obtained during life by lumbar puncture, and in no other way 3 It is probably an inhalation disease and is, therefore, preventable.

St. Louis Medical Review

October 27

22 Note on Boric Acid Relative to Appendicitis. R. Harrison London.
23 Origin of the Custom of Salutation After Sneezing J Knott, Dublin Ireland.

Lancet Clinic, Cincinnati.

November 3

24 Cystic Irritation in Women—Some Considerations for its Management. C D Palmer Cincinnati.

Annals of Surgery, Philadelphia.

October

25 *Filariasis. J H Cunningham, Jr Boston.
26 Radical Cure of Femoral Hernia. W B Coley New York.
27 *Cysts of the Urachus. W R Weiser Springfield Mass.
28 *Value of the Indigo-Carmin Test as an Aid in the Diagnosis of Partial and Total Ureteral Occlusions. E Beer, New York.
29 *Arteriovenous Anastomosis J C. Hubbard Boston
30 *Prostatectomy in Two Stages. C. H Chetwood New York.
31 *The Female Prostate C D. Barnett, Ft. Wayne, Ind.
32 *Teratomata of the Inguinoscrotal Region. D C. Hilton, Lincoln Neb
33 *A Method of Drainage of the Ankle Joint. P R Bolton, New York.
34 *Sarcoma and Myoma of the Stomach. J L. Yates, Milwaukee, Wis.

25 **Filariasis**—Cunningham reports a case which was treated surgically He says that the relatively large number of cases treated medically, and the little benefit so obtained, leads one to hope that more cases may receive surgical treatment Even though the parent worms are not found, as in Cunningham's case, they may be retained within the diseased mass and escape detection, the embryos disappearing from the blood, and the individual remaining free from his symptoms On the other hand, when the parent filariæ are known to be left, alleviation of the symptoms has followed by overcoming the stasis and regurgitation of chyle

27 **Cysts of Urachus**—Weiser reports three cases which are typical of the more serious type of these cases by reason of their considerable size and their dipping down into, and being adherent to, the pelvic viscera Their being in each case extraperitoneal, with bladder attachment, makes the diagnosis conclusive Weiser says that Tait's technic is naturally depended on largely in the treatment Incision and drainage are the first essentials A large proportion of these cysts can not be extirpated, and Tait used irrigation and mopping with iodin. In two of his cases Weiser simply irrigated and drained, with good recovery The detached peritoneum is troublesome, but, as suggested by Douglas, may be sutured back to the parietes, then to omentum, or excised and spread over the gap

28 **Indigo Carmine Test of Ureteral Occlusions.**—According to Beer, the cystoscopic study of the behavior of the ureteral orifices does not suffice for the diagnosis of ureteral obstructions The cystoscopic study of the ureteral jet, especially if the urine is normal, is equally insufficient Ureteral catheterization *per se* can not determine the presence of ureteral obstruction. Similarly the indigo carmin test *per se* is as adequate as ureteral catheterization *per se*, because though the ureter be patent, indigo-carmin may not be excreted if the kidney under examination is diseased On the other hand, ureteral catheterization conjoined with the indigo carmin test is a very satisfactory method of determining the presence or absence of a ureteral obstruction as well as the degree of patency of the ureter

29 **Arteriovenous Anastomosis**—Hubbard reports a case of arteriovenous anastomosis in a man, 80 years old, who came to the hospital for gangrene of the middle toe of the right foot The gangrene was kept dry, but slowly progressed so that the middle toe sloughed off and the neighboring toes became involved in the process An arteriovenous anastomosis was done, but an amputation of the leg had to be done four weeks later to remove the gangrenous portion of the foot Both anterior and posterior tibial arteries contained arterial blood, which spurted out from the cut ends with fairly good force The veins did not appear to contain any arterial blood.

30 **Prostatectomy in Two Stages**—Chetwood reports his observations made during the past year in a class of cases of prostatic surgery which may be described as bad risks, or those which go to make the mortality rate of any operator high A summary of these cases shows that the ages of the patients were, respectively, as follows 80, 53, 79, 77, 67, 69, 65, 70, the average being three score years and ten Two of them, in the neighborhood of 80 years, were exceedingly feeble and were considered questionable risks on this score One gave evidence of advanced renal implication Three others were emergencies, in that they had for several days suffered from acute retention relieved by aspiration One of these had infiltration of urine in the prevesical region and two of them intravesical hemorrhage Three other patients were soft, flabby, neurotic and more or less broken down in health, and would be classified as poor surgical risks on this [illegible] All of them were submitted to com [illegible] of [illegible] prostate, after preliminary [illegible]n,

which instance, on account of the serious kidney complication, the galvano cautery technic was employed. All of them, up to the present, have done remarkably well, the last reports dating from several weeks to twelve months after operation. Chetwood lays particular stress on the great value of formal dehyd gelatin as a local hemostatic. It is his custom to employ it after all perineal operations, and since its use he has never had serious hemorrhage.

31 **Female Prostate.**—Barnett found, after having made a number of female bladder dissections, that the deep urethral glands of the female were located midway between the neck of the bladder and the external urinary meatus, placed laterally to the urethra, above the vesicovaginal fascia, and having ducts which empty just internal to the external meatus. When hypertrophic, the gland encroached on the bladder neck, the changes in shape during hypertrophy being similar to the male prostate during its outcroppings of lobules. He reports three cases in which these glands were inflamed.

32 **Teratomata of Inguinoscrotal Region.**—Hilton reports one case and reviews the cases previously recorded in the literature.

33 **Drainage of Ankle Joint.**—The plan adopted by Bolton in several more recent cases consisted in excision of the astragalus and the drainage of the ankle through the space so created. The astragalus itself is most accessible through an incision over its head parallel to and to the outer side of the extensor tendons made with the foot strongly adducted. Through this the neck is seized by heavy forceps and drawn on while the attached ligaments are divided and the bone freed and removed. Counter openings can now be made behind on either side of the tendo Achillis and drainage tubes placed in them. After thoroughly cleansing the joint cavity and taking care of the bone injuries, the space is packed with gauze through the anterior opening, and the latter kept open by the end of the gauze packing. The foot is then brought into proper position and enveloped along with the leg in a bulky dressing and placed in a gutter splint. The first dressing is made about the fourth or fifth day, not sooner, unless special reasons develop, and subsequent dressings at intervals of about three days. The final result shows an ankle in which there is slight motion, the foot at right angles to the leg, and the distance from the knee to the under surface of the heel shortened from about three eighths to one half inch. Since adopting this method Bolton has not seen a cellulitis of the leg develop and he has not been compelled to amputate in a single instance.

34 **Sarcoma and Myoma of Stomach.**—Yates reports three cases from Ochsner's clinic which illustrate the early development of a myoma as well as the two main clinico pathologic groups into which primary gastric sarcoma may be divided, the one clinically indistinguishable from carcinoma, the other relatively benign and at times capable of preoperative recognition. Yates concludes that sarcoma of the stomach, though an uncommon affection, is less rare than has been supposed. The diagnosis of the round cell varieties is practically impossible, though its existence under certain conditions might be suspected. Those of the spindle-cell type should be frequently recognized and often suspected. In either case the early recognition of a purely surgical condition is in the majority of instances easy. Since prompt radical treatment offers not alone the best, but also the only hope of permanent relief, without a forbidding immediate mortality (which now should not exceed 10 per cent), procrastination here, as in all cases of suspected malignant disease, is in keeping neither with science nor humanity.

University of Pennsylvania Medical Bulletin, Philadelphia

October

35 *Abscess of the Brain. W G Spiller Philadelphia.
36 Mett's Method for Estimating the Activity of Pepsin. J Sailer and C B Farr Philadelphia.
37 *Aneurism of the Arch of the Aorta Producing a Broncho-Esophageal Fistula. A. O J Kelly and R. S. Lavenson Philadelphia.
38 *Floating Kidney Its Significance and Treatment, with Special Reference to a Method of Performing Nephropexy. H D Beyea, Philadelphia.
39 *Study of the Nature of the Micro-Organisms Found in the Mouths and Throats of Healthy Persons. J B Rucker Jr Philadelphia.

35 **Abscess of the Brain.**—Spiller reports five cases. The first case, one of sinus thrombosis with the symptoms of brain abscess, occurred in a young man, 15 years of age, who made a complete recovery after operation. The second case, one of otitis media of long standing with symptoms of brain abscess of short duration, occurred in a man of 68 years of age. Death ensued three days after the evacuation of a cerebral abscess in the sphenotemporal bone. The third case, a cerebellar abscess from occlusion of the posterior interior cerebellar artery, was not recognized during the patient's life. At the autopsy there was found embolism and aneurism of the left posterior inferior cerebellar artery, with fibrosis of the left cerebellar hemisphere and two abscesses of the left cerebellar lobe. The fourth case also came to the postmortem table, when it was found that there was a tuberculous meningitis, with miliary tuberculosis of both lungs, which had caused symptoms of brain abscess. The fifth case was one of abscess of the left temporal lobe. The abscess was evacuated, but the patient died.

37 **Aneurism of Arch of Aorta.**—The patient, whose case is reported by Kelly and Lavenson, was a woman 37 years of age, who began to have pain in the right side of the chest about two and one half months before entering the hospital without any known cause. This pain was worse on exertion and was especially aggravated by using the right arm. It was at times relieved by lying down, but grew progressively worse. About six weeks before entering the hospital the patient first noticed a protuberance of her chest which was very tender. There was some dyspnea, palpation and a little cough. All the symptoms in the case were characteristic of an aneurism of the arch of the aorta. The patient died almost a year after the onset of her trouble. As the sternum was removed there was found to be adherent to it, at the junction of the second costal cartilage with the sternm, an aneurism arising from the junction of approximately the ascending and the transverse portions of the arch of the aorta. Its main axis was anteriorly in the direction of its attachment to the sternum. It contained a grayish red laminated clot which projected into the left ventricle, where it was attached to the musculi pectinati. On the posterior wall of the ascending arch and considerably nearer to the aortic leaflets than the preceding aneurism, was a second aneurism which, extending posteriorly, compressed the trachea at the level of the bifurcation. The aneurism had broken down the arch of the tracheal rings and had exerted such pressure on the posterior wall as to produce necrosis with a resulting fistula between the left bronchus just below the bifurcation and the esophagus.

38 **Floating Kidney.**—The principle which Beyea believes is demanded in the operation of nephropexy is that in the technic of performance of the operation neither the kidney, parenchyma or fibrous capsule of the kidney should be injured or disturbed by suture or other means, and that no extensive pericapsulitis should follow to form tissue which will contract, press on, or involve the underlying parenchyma. Further, the operation should avoid any cicatricial change in the lumbar incision. The adhesions to the external capsule of the kidney should be just sufficient to maintain the kidney in permanent normal position. Beyea has modified his operation, first described in 1901, by placing the one rubber tube at the extremity of the lower pole so as to secure the kidney in a higher position, just below where it would be impinged on by changes in the size of the liver, therefore, in normal position. This operation has now been performed in at least 50 cases, and a period of from seven and one half years to a few weeks have elapsed, and in no instance has a recurrence or symptom referable to the operation been reported. There has been no mortality.

39 **Micro organisms in Mouths and Throats of Healthy Persons.**—All the throats examined by Rucker contained streptococci and diplococci, showing them to be normal inhabitants of the normal mouth and throat. *Streptococcus mucosus* was found in 70 per cent of all cases. Atypical pneumococcus occurred in 50 per cent of the 20 cases. Typical pneumococcus was present five times or in 25 per cent of the number of cases examined. Organisms of the same species may behave differently in their action on starch if the organisms are from different sources.

Pennsylvania Medical Journal, Athens.

October

40 *Address of the President Medical Society of Pennsylvania Duties and Advances of the Medical Profession W H Hartzell Allentown
41 *Oration on State Medicine, Medical Society of Pennsylvania S G Dixon Ardmore.
42 The Trained Nurse in the Public Schools as a Factor in the Education of the Children S. W Newmayer Philadelphia
43 *Salt Free Treatment of Epilepsy Apropos of Thirty Seven Cases. A. Gordon Philadelphia.
44 Prophylaxis and Management of Prostitution D Lewis Chicago
45 *Abscess of the Brain W G Spiller Philadelphia
46 Heart Tonics and Stimulants R. Myers Huntingdon
47 Infant Feeding R J Hemminger Meyersdale

40 —See The Journal, Sept 29, 1906, page 1048

41, 43 —See The Journal, Oct 20, 1906, page 1322

45 —This article also appeared in the *University of Pennsylvania Medical Bulletin,* see abstract No 35

Colorado Medicine, Denver

October

48 *President's Address Colorado State Medical Society H G Wetherill Denver
49 Diagnosis of Acute Abdominal Disorders J N Hall, Denver
50 Tertiary Syphilis. F G Mohlan, Pueblo Colo

48 —See The Journal, Oct 27, 1906, page 1403

Illinois Medical Journal, Springfield.

October

51 Cytodiagnosis of Pleuritic and Pericardial Fluids of All Sorts A A Goldsmith Chicago
52 Empyema. L. C. Taylor Springfield.
53 *General Symptomatology and Physical Signs of Pleuritis. C S Williamson Chicago
54 Pericarditis General Symptoms and Physical Signs Mechanical Effects of Fluid Distension of the Sac. C A. Elliott Chicago
55 Diagnosis of Effusive Pleurisy and Pericarditis. E. F Wells, Chicago
56 Treatment of Pleurisies and Pericarditis N S Davis, Chicago
57 Pathogenesis of Ascites. T Tieken Chicago
58 Symptoms and Physical Signs of Peritonitis. C L. Mix Chicago
59 Differential Diagnosis of Peritonitis and of Its Various Forms E K. Kerr, Chicago
60 Pathogenesis, Etiology and Pathology of Peritonitis W A Evans Chicago
61 *Disease in the Aged. W H Curtis Wilmington
62 Surgical Aspects in the Aged G E. Rosenthal Quincy
63 *Manifestations of Rheumatic Infection in Children C. M Wood, Decatur
64 *Hemangioma and Its Treatment C Beck Chicago

53, 61, 63 —See The Journal, June 9, 1906, page 1787

64 —See The Journal, June 23, 1906, page 1965

The Laryngoscope, St Louis, Mo

October

65 *Results Obtained from the Radical Operation for Chronic Purulent Otitis Media E B Dench New York
66 Cavernous Sinus Thrombosis in Children Following Mastoid Inflammation H G Langworthy Dubuque Iowa
67 What Is the Present Status of the Operative Treatment of Deviation of the Nasal Septum? J R. Winslow Baltimore Md
68 *Climatic Treatment of Tuberculosis of the Upper Air Tract W Freudenthal New York
69 *Is It Necessary to Open the Antrum in Every Case of Mastoid Operation? G F Cott, Buffalo N Y
70 Case of Xanthoma Multiplex with Interesting Throat Complications. J E Rhodes Chicago
71 Two Cases of Radical Operation on the Maxillary Sinus and Ethmoid L. R Culbertson Zanesville, Ohio
72 Sarcoma of the Nose R F Miller Sherman Texas
73 Nasal Sarcoma. J A. Watson Minneapolis.
74 A Trocar Pointed Antrum Drill H R Boettcher, Chicago
75 The Maxillary Sinus Operation that Has Yielded Me the Best Results C. Jackson Pittsburg Pa
76 A Practical Tongue Depressor W W Bulette Pueblo Colo

65 —This article appeared in the *Annals of Otology, Rhinology and Laryngology* for September, see also abstract in The Journal, July 21, 1906, page 230

68 —This article also appeared in the *Annals of Otology Rhinology and Laryngology* for September

69 —See The Journal, Sept 22, 1906, page 959

Annals of Ophthalmology, St. Louis, Mo

July

77 Cases of Associated Coloboma Oculi and Arteria Hyaloidea Persistens D De Beck Seattle Wash
78 Ophthalmic Sins of Hospitals G M Gould Philadelphia
79 Hysterical Binocular Amaurosis I L. Henderson St Louis
80 A Life and Career Blighted by Ignored Eyestrain G M Gould Philadelphia
81 Case of Chorioidoretinal Sclerosis with Spontaneous Dislocation of the Lenses Complete and Incomplete W T Shoemaker Philadelphia.
82 A New Contribution to Congenital Pigmentation of the Cornea. A Kraemer San Diego
83 Progress of a Year in the Recognition of Eyestrain Reflexes G M. Gould Philadelphia.
84 Center of Motion and the Angle Alpha. L. Howe, Buffalo
85 Gummata of the Cornea. A. Terson Paris.

Annals of Otology, Rhinology and Laryngology, St. Louis, Mo

September

86 Results Obtained from the Radical Operation for Chronic Purulent Otitis Media S Mac. Smith, Philadelphia.
87 *Id E B Dench New York
88 Ocular Symptoms of Nasal Origin. H Hastings, Los Angeles Cal.
89 *Herpes Zoster Auris. D T Vail, Cincinnati.
90 *Sarcoma of the Nasopharynx—Treatment by Injections of Adrenalin J E Rhodes Chicago
91 *Infective Sigmoid Sinus Thrombosis. H B Ellis, Los Angeles
92 Three Fatal Cases of Meningitis with Peculiar Ear Symptoms. W H Roberts Pasadena Cal
93 The Nasal Turbinate as a Vasomotor Index. J A Babbitt Philadelphia.
94 Postoperative Meningitis. T J Harris, New York.
95 Modified Blood Clot in Mastoid Surgery W S. Bryant New York
96 *Medical Treatment of Tuberculosis of the Upper Air Passages and the Ear W C. Bane, Denver
97 Climatic Treatment of Tuberculosis of the Upper Air Tract. W Freudenthal New York.
98 Aspiration of the Tympanic Cavity in Otitis Media. P Fridenberg New York.
99 Morphology and Embryology of the Nasal Fossæ of Vertebrates. L. Dieulafe.
100 Surgical Treatment of Tuberculosis of the Upper Air Passages and the Ear R Levy Denver

87 and 91 —See The Journal, July 21, 1906, page 230

89 —See The Journal, July 28, 1906, page 299

90 —See The Journal, Aug 11, 1906, page 430

96 —See The Journal, July 28, 1906, page 300

Philippine Journal of Science, Manila.

September

101 *Studies in Beriberi M. Herzog, Manila
102 Notes on Four Birds from Luzon and on a Species of Doubtful Occurrence in the Philippines R. C McGregor Manila.
103 A New Genus and Species of Culicidæ C S Banks Manila
104 Change of Name in Coccidæ C S Banks, Manila

101 Beriberi —Herzog concludes that beriberi, kakke or neuritis multiplex endemica is an acute, subacute or chronic disease, generally only prevalent in certain well defined territories It is clinically characterized by disturbances of circulation, of motion and of sensation Its most pronounced anatomic lesions are, first, hypertrophy and degeneration of the myocardium and degeneration of the peripheral nerves and skeletal muscles and second, localized or more or less general edema, parenchymatous degeneration of the kidneys, liver and interstitial hepatitis Beriberi is neither primarily a nutritional disturbance nor a simple intoxication like lead, alcohol, arsenic or similar intoxications accompanied with multiple peripheral neuritis, but is an infectious disease Herzog states that his animal experiments and blood examinations appear to indicate very strongly that none of the claims brought forward for the discovery of a specific micro organism for the disease can be looked on as substantiated He expresses the belief that beriberi is due to an organism which gains entrance into the human body, either directly or through food, and there produces a toxin which in character and effect is similar to the diphtheria or tetanus toxin and which by an accumulative action gives rise to the well characterized anatomic and histologic lesions of beriberi

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

October 20

1 *Management of Advanced Heart Disease R Saundby
2 *Rubber Teat and Deformities of the Jaws T F Ledley
3 *Combined Antrum Plug and Artificial Denture A S Hayman
4 Filarial Larva in the Blood of a Blackbird W St C Symmers
5 Observation of Spirochetes in Yaws and Granuloma Pudendi A MacLennan
6 Blood Pressure in Relation to Disease J M Dawson C A Gibson W Broadbent T C Allbutt J Mackenzie etc
7 Clinical Manifestations Visceral and General of Arteriosclerosis. A Stengel
8 *Treatment of Typh[illegible] ver W B Thistle
9 *Influence [illegible] ng in Treatment of Typhoid I J Smit
10 *Syri[illegible]
11 Re[illegible] chi[illegible]
12 Lx [illegible] Treat
1[illegible] F

14 **Influence of Bodily Posture on the Position of the Heart.* R. D Rudolf and S Cummings
15 Gastric Neurasthenia H A. MacCallum
16 Pre-Insane Stage of Acute Mental Disease. C. Meyers

1 Management of Advanced Heart Disease —Saundby states that so long as a patient with heart disease is well enough to take exercise it is better that he should do so than be confined to bed. He has seen the best results in the treatment of a weakened myocardium from the systematic use of the Nauheim baths and the exercises devised by the Brothers Schott Heart disease should be treated by rest in a more or less recumbent position 1, when there is a certain amount of dropsy present, 2, if walking brings on severe dyspnea or pain, 3, if the state of the circulation is so bad as to cause danger of syncope The meals should be small in bulk, composed of non irritating and easily digestible food containing a small quantity of proteid. A mixed diet is preferable. These indications are fulfilled by five small meals daily at intervals of about two and a half hours, avoiding the use of smoked and salted meats, cooked fats, fried and greasy dishes, uncooked fruits, raw vegetables, condiments and spices, and restricting the use of animal food to four ounces daily, which should be easily digestible, such as whitefish, chicken, partridge, lamb, mutton, calves' head and feet, or sweetbreads If the patient's teeth are defective, the meat must be minced or pounded, as there is no more frequent cause of indigestion than insufficient mastication. Tea and coffee must be prescribed with caution. *Alcohol should be used sparingly as an article* of diet It is unnecessary and often does more harm than good The use of tobacco should be forbidden

Among the heart tonics employed Saundby mentions digitalis, strophanthus, nux vomica and strychnin, caffein and theobromin, and tincture of convallaria which, in 15 minim doses in combination with caffein or theobromin, he has found very useful in advanced cases of aortic disease To produce a permanent unloading of the weight on the heart, Saundby employs erythrol tetranitrate, ½ grain, every four hours, while the patient is awake Sometimes he combines it with digitalin, giving the drugs alternately, with four hours interval between the doses of each He has no confidence in belladonna When the abdominal cavity is full of fluid he says it is better to tap than to waste time with drugs The judicious use of purgatives is of the greatest service in the treatment of cardiac dropsy, but their action needs watching Saundby prefers elaterium, ⅛ grain, twice a day In his experience the value of oxygen is small.

2 Rubber Teat and Deformities of Jaws —Pedley writes on the use of the rubber teat and baby comforter and their giving rise to certain deformities of the jaws, irregularities of the teeth, nasal obstruction and other diseases in infancy and childhood

3 Antrum Plug —Hayman describes a procedure which he employs in cases of antral empyema which for some reason are unsuited for radical treatment. In these cases all that can be done is to trephine He prepares a gold plate, fitting absolutely closely to the palate and alveolar ridge, taking special care that the plate is closely applied to the buccal surface of the alveolar ridge, thus preventing access of food to the plug *and antral opening On the upper surface of this closely fit*ting gold plate is soldered a solid gold pin, one eighth of an inch thick, of sufficient length to pass freely up into the antrum On the lower surface of the antral bridge is fitted the necessary tooth to supply the place of the missing first and second molar, and such other teeth may be added to the plate as are required in the ordinary manner The patient is instructed to syringe with the ordinary antiseptic lotions as may be prescribed by the surgeon, every time the plate is removed *and replaced, at least three or four times a day*

8 Treatment of Typhoid.—Thistle looks on the early use of purgatives in typhoid as the surest protection against perforation and hemorrhage, and the continued use of them as the most efficient means against dangerous intoxication. When a case of typhoid comes under his care he immediately gives 2 grains of calomel, following by one half ounce of magnesium sulphate or other saline This process is repeated day after day, the object being to prevent additional infection and to abstract toxins from the body

0 *Early Feeding in Typhoid.*—In 113 cases of typhoid treated by Smith 24 patients died, a mortality of 21 per cent In 4 cases food had been given before the patient died. In the remaining fatal 20 cases no food had been given. The average day of the disease on which eggs and bread and butter were given was the twenty fourth The average day of the disease on which fish was given was the thirty second. The average day on which meat was given was the forty first. Feeding in the cases treated by the rest of the staff was begun on the thirty seventh, forty fourth and fifty fith days respectively Dr Smith's patients remained in the hospital on an average of 48 days In the cases of the rest of the staff this was 57 days The rest of the staff treated, during the same period, 1 429 *cases, with 235 deaths, a mortality of 16* per cent. *Among* them 12 patients had had food before death, 223 died before food was given. Among Smith's 113 cases, thrombosis of veins, periostitis and abscess formation occurred in only 2 per cent. In the cases treated by the rest of the staff these complications occurred in over 10 per cent Among Smith's cases there were 16 relapses, 14 per cent. In the case of the rest of the staff there were 203 relapses, 14 per cent

10 *Syringomyelia.—Spiller reports a case of syringomyelia* in which the lesion extended from the sacral region of the spinal cord through the medulla oblongata, right side of the pons and right cerebral peduncle to the upper part of the right internal capsule

14 Posture and Position of Heart.—The points brought out by Rudolf and Cummings are summarized as follows 1 The normal heart tends to change its position in the chest under the influence of gravity, being nearer to the sternum in the vertical and prone postures than in the *recumbent one* 2 As a result of this, the cardiac dulness is altered in the different postures, being lower and wider in the upright than in the recumbent positions Also the sounds of the heart tend to become louder in the vertical than in the recumbent position. 3 The degree of mobility of the heart is very different in different individuals, in some being scarcely apparent while in others it is marked Adults show it more than children, and it is especially evident in certain diseases—for example, chlo*rosis, neurasthenia and hypochondriasis 4 In all cases in* which accuracy is necessary the heart should be examined in both the vertical and the recumbent postures

The Lancet, London.

October 20

17 Then and Now in Surgery C. A. Ballance.
18 Medical Books. N Moore.
19 *Enlarged Veins in Children. A. G Gibson.
20 *Strangulation of the Appendix Vermiformis in Hernial Sacs H S Clogg.
21 Detection of Sugar in Urine and Its Significance in Connection with Life Assurance. A M. Kellas and F J Wethered.
22 *New Aspect of the Pathology and Treatment of Leprosy R S Black.
23 *Method of Taking Impressions of the Weight Bearing Surface of the Foot. W D Lawrie
24 Oral Sepsis in Operations on the Throat. W Wingrave.

19 Enlarged Veins in Children.—Records have been kept by Gibson of 14 cases showing visible venules together with dilated jugulars which behave abnormally on respiration. All these patients suffered from general debility, wasting and listlessness Seven cases *occurred in males and 7 in females* The ages ranged from 4 to 10 years In 57 per cent there was a history of tuberculosis in the family, visible veins on the chest were present in 92 per cent , downy hair in 42 per cent., a Eustace Smith retraction murmur in 71 per cent, and palpable glands in the neck in 64 per cent.

20 Strangulation of Appendix in Hernial Tract.—Clogg states that of the 53 reported cases of this kind only 3 occurred in males, and of these 3, 2 were children, one, a baby, *5 weeks old, and the other 22 months old Both were in*guinal hernias Fifty cases occurred in women and in every case the appendix was strangulated in a femoral hernia. Twenty two of these 50 patients were known to have a hernia before strangulation occurred. The characteristics of these hernias are said to be that they are of small size, generally early reducible, and only present on occasions and not constantly, sometimes only having been observed once or twice previously to strangulation. The author's three cases are reported *in full.*

22 Leprosy—Black thinks that there can be hardly any doubt that leprosy in its early stages begins as a small ulcer on some part of the nasal mucous membrane, and that this ulcer may heal and pass entirely away This, he thinks, is the explanation of the maculo anesthetic cases During the time the ulcer exists leucocytes get detached from the ulcerating spot and along with the bacilli which they are attempting to devour are carried by the blood stream and lodged in various situations in the peripheral nerves, where they become entangled, and the bacilli then proceed to grow, causing pressure on the fine nerve fibrils and consequently setting up nutritive changes in the skin which these axis cylinders supply, thus causing the patches of discoloration and anesthesia

In the nodular and mixed cases the progress of the disease is quite different Instead of the nasal ulcer healing up it proceeds to grow apace, causing extensive destruction of the nasal mucous membrane, causing it to swell up and ultimately attacking the nasal bones themselves The accumulating swelling of the mucous membrane extending into the numerous interstices of the nasopharyngeal cavity causes the face to assume its characteristic appearance of this clinical variety of the disease, assisted, of course, by the leprotic infiltration from the festering nasal ulcer But the festering sore has other consequences As in maculo anesthetic leprosy the leucocytes get entangled in the peripheral nerve and cause anesthesias and discoloration of the skin and also form accumulations in other organs and tissues Black thinks that if the disease is diagnosed early, curetting and antiseptic washes will do much to destroy the initial lesion and to prevent the spread of the disease to other parts of the body He says that it has been clearly shown that the disease in the natural course of events tends rapidly to die out in the body unless reinforced by a continual supply of the bacilli as is the case of nodular epilepsy from the extending nasal ulcer

23 Method of Taking Impression of Foot.—Lawrie describes a method recently advocated by Schuman of Leipsic The foot is painted with a 5 per cent. solution of ferrocyanid of potash and it is then placed on a sheet of paper which has been thinly coated with a solution of ferric chlorid. This leaves a good impression which is permanent and requires no after treatment.

Intercolonial Medical Journal of Australasia, Melbourne
September 20

25 Theory and Technic of Cerebrospinal Drainage R. H Russell
26 Tumor of the Brain, with Meningitis, Probably Tubercular—Relief and Rest of the Symptoms by Trephining R. R Stawell and J W Barrett.
27 Bacteriologic Examination of the Melbourne Water Supply R J Bull.
28 Pericarditis in Children Considered Surgically W Mackenzie
29 *Resuscitation of a Patient Apparently Dead from Primary Heart Failure. J Ramsay
30 Two Cases of Optic Neuritis. J W Barrett.
31 The Radical Mastoid Operation. J W Barrett.
32 *Epithelioma of the Tongue—Operation by McCormick's Method. W Moore.

29 Resuscitation from Heart Failure—Ramsay reports the case of a woman who was practically dead, following an operation for uterine prolapse, in which massage of the heart resulted in a return to life The right hand was passed through an epigastric incision and inserted between the liver and diaphragm Bimanual squeezings with the left hand in the precordial region, and with the right under the diaphragm, were made about every second. After about a dozen squeezes a slight quiver was felt, and after another dozen or so of squeezes a fetal heartbeat was felt. The pulse could be felt at the wrist after an absence of about five minutes Spontaneous respiration then commenced and a regular circulation and respiration were restored Further progress was uneventful.

32 Epithelioma of Tongue.—The chief interest of Moore's case is the good result that was obtained in a case that appeared to be altogether hopeless

Glasgow Medical Journal.
October

33 *Two Cases of Syringomyelia. T K. Monro and H M Laren
34 Case of Anastomosis Between the Femoral Veins Subsequent to Thrombosis of the *Left External Iliac Vein During* Typhoid Fever A N M'Gregor
35 Nasal Headache W S Syme
36 Case of Mixed Celled Leukemia L. Findlay

33 Syringomyelia.—Monro and McLaren report 2 cases, one of which came to autopsy They found a cavity in the spinal cord extending horizontally into each posterior horn, and vertically from the second cervical to the middle lumbar region, constituted throughout the greater part of its length by the dilated central canal, but separate from that canal at both its upper and its lower extremity Widespread sclerosis of the cord was present in almost the whole of its extent. Degenerative changes in nerves of the lower limbs were also noted

The Australasian Medical Gazette, Sydney
September 20

37 *Treatment of Pulmonary Tuberculosis. C. Reissmann.
38 Treatment of Tubercular Disease of the Upper Respiratory Tract. T K. Hamilton
39 Open Air Treatment of Consumption A. A. Lendon
40 Pressure Forceps in Abdominal Cavity for Ten and One-half Years. J E F Stewart.
41 *Notes on Some Anesthetic Sequences. A. G McGowan.
42 Gonorrheal Infection in Children W J Plomley
43 *An Unusual and Unique Case of Toxemia. A. E. Randell
44 *An Unusual Case F C. S Shaw

37 Treatment of Pulmonary Tuberculosis.—Reissmann believes that the opsonic treatment in conjunction with the sanatorium method will soon be recognized as the appropriate treatment of every early case of pulmonary tuberculosis

41 Anesthetic Sequences.—Unless specially contraindicated, McGowan's routine practice for general anesthesia is to use ethyl chlorid and ether first till the operation is well advanced giving the ether with the bag off the inhaler as much as possible, as he does not believe in too much rebreathing after the early stages When the worst of the operation is over he changes to C.E mixture on a Silk's mask, giving abundant air suply therewith, and toward the end a few drops of chloroform on an open mask will suffice for the cleaning up and suturing This is an ethyl chlorid ether—A.C E—chloroform sequence, cumbersome, but in McGowan's experience quite satisfactory

43 Unusual Case of Toxemia.—Randell reports the case of a woman who was complaining of a swollen and very painful lower lip She thought a fly must have stung it, but could not say that such was certainly the case Randell regarded it as a "bunged" lip, but he had never before seen one in which the swelling had occurred so rapidly, nor one in which the patient complained of so much pain. The lip was very much swollen and edematous, and almost as stiff as a bit of wood It was pale, and there was no indication of any inflammation. The patient was incessantly retching and complained of great pain in the lip and in the parts immediately around it It was very painful when touched. The lip was inclined to be cold rather than hot The body temperature was slightly subnormal, the pulse was 120 a minute, and respiration about 25 The swelling greatly increased and extended to the upper lip, the right eye was closed, and there was a good deal of swelling under the chin.

The following morning the swelling had completely surrounded the mouth, had nearly reached the right ear, and had passed down the front of the neck as far as the episternal notch, there was a mottled appearance of the lips and right cheek, but no crepitant sensation, patches being purplish, but no greenish discoloration Under the chin were a few blebs containing clear serum The swelling spread down the chest to the third rib, half way out to the shoulders, around to the back of the neck, and on to the left cheek, the epidermis had left the right side of the lower lip All sensations had gone from the lips and adjacent parts, and the mottling discoloration had spread nearly as far as the right ear and to the point of the chin The patient died, very quickly and quietly, a little over 26 hours after the appearance of the first symptoms, having retained perfect consciousness up to the last moment.

44 Probable Rupture of Liver Abscess in [illegible] Bronchus.—Shaw
reports a case in which the [illegible] ubtful The
tient, a man, aged 27, had
first felt some pain in the
part of the lung, and la
he shivered and sweated
come hot and
months previous to con

the pain became so severe that he had to lie in bed. He noticed also at this time that his right side, over the liver region, was more swollen than the left He now suffered also from a slight cough, and a fortnight after going to bed, during an attack of coughing, something broke, and he coughed up a great quantity of thick, creamy fluid, streaked with blood He coughed up several quarts of this matter for two days, and then the color changed to brownish green, and the fluid became thinner and the paroxysms of coughing not so frequent These paroxysms of coughing continued for about six months Recovery was to a marked extent due to the antiseptic effect of the free flow of bile

The Bristol Medico-Chirurgical Journal.

September

45 Adaptation of Means in the Prevention of Disease. D S Davies
46 *Treatment of Tabetic Ataxia by Methodical Exercises. M Faure.
47 Case of Mesenteric Thrombosis. C. M. Smith
48 Treatment of Diabetes with Secretin J R Charles.
49 The Doctor as Expert and Pioneer C J Whitby
50 Uses of Static Electricity as an Aid to Recovery P King
51 Explanation of Alveolar Cleft Palate. E Fawcett.

46 **Treatment of Tabetic Ataxia by Methodical Exercises**—Faure states that if one succeeds (and this is possible with exercise and special care) in keeping respiration, defecation and micturition in a normal condition, the health of the tabetic may be prolonged almost indefinitely He has succeeded in combining in one system the re education in walking with that of equilibrium and maintenance of movements of the trunk, and the walk that he teaches is effected in such a manner that while insuring the maximum of stability with the minimum of effort, it serves at the same time, and with slight modifications, for walking up or downhill, on the level or on irregular ground, all points which the ideal walk and the military march fail to accomplish Faure has fixed on a method for the compensatory treatment of the ataxia of tabetics, taking into consideration not only the motor disturbances of the arms and the legs, but also the incoördination of the trunk, the defects of sensibility, the insufficiency of inspiration, of micturition and defecation, the difficulties in equilibration, and the sense of position, completely modifying the health and duration of the life of the tabetic, and the prognosis and the evolution of tabes A full description of the method is promised later

Bulletin de l'Académie de Médecine, Paris.

52 (Year LXX, No 33) *Chloroform in the Blood.—Procédé de dosage du chloroforme dans le sang et dans les tissus M Nicloux
53 *La syphilis des honnêtes femmes (wives infected by their husbands) A. Fournier

52 **Dosage of Chloroform in Blood and Tissues**—Nicloux solves the problem by distillation in the presence of a large excess of alcohol. The chloroform is eliminated from the blood, but is dissolved at once in the alcohol He has found that the chloroform is taken up most by tissues containing fats or lecithin. The adipose tissue, when it is well vascularized, can hold enormous quantities of chloroform

53 **Wives Infected with Syphilis by Their Husbands**—Fournier's previous communication on this subject was mentioned on page 1600 He here expatiates on the frequency of unmistakable secondary lesions occurring after the tertiary period is long established, 15, 20, 30 or even 39 years after infection, especially in the mouths of smokers These lesions are as contagious as those occurring early, and he cites numerous instances of infection of the wife after a dozen or more years One of his patients, infected in 1868, married 15 years later, but he frequently had lesions in his mouth, as he was an inveterate smoker These lesions sometimes were mere erosions and sometimes secondary syphilides, the result being that in spite of constant warnings he infected his wife at the seventeenth year Neisser insists that the age of the infection has nothing to do with its infectiousness Fournier preaches the importance of educating patients in regard to the dangers of tardy syphilitic contagion, and also that every syphilitic who wishes to marry is under the moral obligation to refrain from smoking Out of 19 000 syphilitic patients he has encountered 533 who were affected with tardy secondary lesions in the mouth and only 110 with the same on the genitals. He gives a diagram showing the frequency of these mouth lesions up to the twentieth year, as a basis for his condemnation of tobacco for syphilitics who think of marrying Wives infected by their husbands generally run the risks of ignored syphilis One of the gravest dangers is that the physician may fail to recognize it In conclusion Fournier declares that when one has syphilis it is well to know it, first, to ensure adequate treatment, and, secondly, to refrain from giving it to others Ignored syphilis, he adds, is nowhere so common as among married women of irreproachable character

Presse Médicale, Paris

54 (XIV No 73) *De l occlusion intestinale par volvulus de l intestin grêle. P Alglave.
55 (No 74) Les nouvelles théories des solutions dans leurs rapports avec la médecine. L electrolyse des tissus vivants (of living tissues) S Leduc (Nantes)
56 (No 75) *Le kraurosis vulvæ F Jayle, see page 1333
57 (No 76) Les médications electrolytiques. Id
58 *Sensibilité hépatique Point épigastrique. Point xiphodien V Raymond.
59 Du rôle de la physique et de la chimie en médecine. H Delaunay
60 (No 77) Twin Ova.—Les oeufs gémellaires. C. Jeannin
61 *Les injections d eau de mer isotonique dans l'hémophilie des nouveau nés (injections of sea water in hemophilia of the new born) Pelissard and Benhamou
62 Traitement des conjonctivites purulentes aigues Cailland.
63 (No 78) Notions générales sur les anticorps (antibodies) L. Hallion
64 *Tuberculose et glande thyroide. Morin.
65 (No 79) *Des douleurs tardives de l estomac et de leur traitement (tardy gastric pain) L. Meunier
66 Corps étrangers superficiels de l oeil (foreign bodies in eye) H. Joseph
67 (No 80 *L habitation Hygiène de l aération A. A. Rey

54 **Intestinal Occlusion from Volvulus of Small Intestine.**—In the case described and illustrated by Alglave the symptoms developed suddenly after the patient, a robust porter, 63 years old, had ingested a large amount of a very cold drink while much heated A purgative was given 24 hours after the first symptoms, and this materially aggravated the condition The volvulus was easily reduced through a laparotomy, but the patient succumbed the same night

56—This article appeared in the *Revue de Gynécologie* and was summarized on page 1333

58 **Local Tenderness of the Liver**—Raymond has been studying on 161 patients the local tenderness of the liver and tabulates the results The principal point where pressure is painful is in the epigastrium, a little to the right of the median line The pain is not intense, but it distresses the patient, he holds his breath, and sometimes he coughs or experiences nausea Sometimes the pain elicited by pressure at this point lasts for hours Pressure on the xiphoid appendix is also liable to elicit the same kind of distressing pain The patients frequently discover this for themselves by the pressure of the table as they bend forward to write. These points of local tenderness enable the entire extent of the free margin of the liver to be outlined, and reveal the pathologic condition of the organ, the stage of the process, and its acute or chronic character If the liver feels hard, springy, without tenderness, the process is essentially chronic with predominance of sclerosis If the liver is enlarged but soft and only slightly sensitive, the process is less advanced and there is hypertrophy or hyperplasia If the liver feels hard or elastic but quite sensitive, the process may be assumed to be an acute one in a chronically affected organ. If the liver feels soft, is difficult to palpate, and is very sensitive to pressure, the morbid process is a recent one and the organ is congested If the liver is painful and soft, and the epigastric and xiphoid points painful both spontaneously and on pressure, the process is an acute infective one, with congestion, or it is an acute phase of a chronic affection Study of the epigastric and xiphoid points will reveal the participation of the liver in cases of dyspepsia He found the liver sensitive to pressure in 57 cases of chronic malaria out of 60 examined, in 37 out of 44 of dyspepsia, in 23 out of 24 of biliary lithiasis, in 12 out of 16 cases of diabetes, in 6 out of 10 of renal lithiasis, and in 1 out of 2 patients with gout Tenderness of the liver is an early sign of trouble in this organ, preceding hepatalgia and enlargement

61 **Injections of Sea Water in Hemophilia.**—Pelissard and Benhamou report the case of an infant with hemorrhages from the nose, ears, skin and digestive tract, the second day

after birth The child seemed to be otherwise healthy, but grew weaker under this constant loss of blood, which persisted notwithstanding energetic treatment with antipyrin, peroxid of hydrogen, gelatinized serum, etc. For 24 hours the hemorrhages continued, when 10 c.c. of isotonic sea water was injected as a last resort The hemorrhages ceased almost at once, by the end of three hours there was no further bleeding, the child wanted to nurse, and there has been no recurrence of the hemophilic tendency to date The day afterward and again a week later the injection of sea water was repeated as a precautionary measure They call the sea water "Quinton's plasma," as Quinton is responsible for its use in therapeutics.

64 **Tuberculosis and the Thyroid Gland.**—Morin has been impressed with the frequency of atrophy of the thyroid gland in cases of pulmonary tuberculosis He reasons that the antitoxic function of the thyroid secretion and the presence of iodin in this secretion justify the use of iodin in tuberculosis to supply the iodin missing in the insufficient thyroid secretion. His experience has been favorable with treatment on this principle

65 **Tardy Pain in the Stomach.**—Meunier believes that the efficacy of sodium bicarbonate in relieving the pains that appear from two to four hours after a meal is not due to its neutralizing the hydrochloric acid, as generally assumed. By this time the secretion of hydrochloric acid has passed its maximum and begun to decline The relief is due to its generation of carbonic acid The same result can be obtained more effectually by administering carbonates and tartaric acid in fractional doses which ensure a slow and continuous generation of carbonic acid, while the combination of the drugs forms a neutral salt incapable of modifying the acidity of the gastric juice or checking its digestive action In fact, the nascent carbonic acid not only arrests the pain, but seems to promote the natural gastric digestion and the evacuation of the stomach. He uses two powders No 1 contains 1 gm of tartaric acid and No 2 three carbonates of varying solubility, so that one dissolves before the other The second powder, therefore, contains 0 4 gm of sodium bicarbonate, 0 3 gm. of calcium carbonate and 0.2 gm of magnesia hydrocarbonate The patient is told to dissolve the two powders in half a glass of water each, and then to take a tablespoonful from one glass and then at once a tablespoonful from the other glass every ten minutes until the pain has ceased. His experience has been very satisfactory with this technic.

67 **Reform in Construction of Dwellings.**—Rey is an architect, and he protests against the application of theories to the building of houses, as theories are liable to be overthrown by new ones to morrow Established facts should be the bases for reforms, and houses should be constructed to conform to the fact which has been incontrovertibly established, namely, the vital necessity of light and air even to the remotest part of our dwellings In the first place, he says, all shut in courts should be abolished. They are no aid to ventilation as the air in them is stagnant air He gives diagrams showing how the same space as is now given up to these inside, shut in, worse than useless courts and yards, could be utilized to supply ample ventilation to all parts of the building The courts should open on the street, and the building should stand in the center of the space, instead of the present plan of building the structure around a central well of stagnant air His diagrams show that cities would gain immensely in beauty by doing away with the solid rows of buildings fronting the street, and having each building stand alone, with small open spaces around it, allowing opportunity for artistic, graceful outlines in the ground plan, even of tenement houses The Antituberculosis Congress of 1905 adopted a resolution to the effect that yards and courts should open on the street, acting on Rey's suggestion, but the matter has not yet been brought sufficiently to public attention.

Beitraege z Klinik der Tuberkulose, Würzburg.

Last indexed page 1421

68 (VI No 1) *Die Tonsillen als Eingangspforten der Tuberkel Bazillen. Bandelier (Cottbus sanatorium)
69 *Die Maximal Dosis in der Tuberkulin Diagnostik. Id.
70 *Der diagnostische Wert der Tuberkulin Inhalation Id.
71 Zur Heilwirkung des Tuberkulins. Heilung eines Lupus durch Perlsucht Tuberkulin Id.
72 (No 2) *Ueber Russ-Inhalation bei Tieren (experimental inhalation of soot) H Bennecke. Id L. Aschoff.
73 *Tuberkulin Reaktion und Tuberkulin Immunität. H Lüdke.
74 *Ueber den diagnostischen Wert des alten Kochschen Tuberkulins. W Roth Schulz
75 *Agglutination bei Lungen Tuberkulose. F Jessen (Davos)

68 **The Tonsils as Entering Point for Tuberculosis.**—Bandelier summarizes the principal communications previously published on this subject, and then gives the details of 100 cases in which the tonsils were found enlarged and tuberculous among 900 tuberculous inmates of the Cottbus sanatorium Tubercles were found in some of the tonsils when outside they were apparently sound in appearance A tuberculous process in the tonsil is a frequent accompaniment of tuberculosis of the lungs, and a primary tuberculous process in the tonsil is occasionally encountered, the result of infection from inhaled or swallowed germs The tonsils as an entering point for tuberculous infection have not much importance for adults, but in children they may serve as well as abrasions of the skin, carious teeth, etc., to allow the entrance of the bacillus

69 **Maximal Dose in Diagnostic Use of Tuberculin.**—Bandelier's extensive experience at Cottbus has confirmed the importance of Koch's technic for the use of tuberculin in diagnosis He affirms that the maximal dose of 10 mg gives the only reliable findings

70 **Diagnostic Value of Inhalation of Tuberculin.**—Bandelier has been giving the method of inhalation of tuberculin in the form of a spray, advocated by Kapralik and H von Schroetter, a thorough trial at the Cottbus sanatorium The results confirm their assertions in regard to the convenience and reliability of this method of tuberculin diagnosis, although further experience is needed to determine some of the practical points, especially the minimal dosage They used the Bulling vaporizer and found that 30 mg of tuberculin was necessary to induce the reaction, even with active tuberculosis of the lungs, as only a small proportion of the amount inhaled is absorbed, the rest not being retained but swept out again by the expired air In case of an inactive or latent process, in the non tuberculous in the clinical sense, and in case of tuberculous processes elsewhere than in the lungs, the amount of tuberculin necessary to induce a reaction averaged 250 mg Tuberculous individuals who react to a small dose show that they have an active process in the lungs, while this is excluded if no reaction occurs without a very large dose In case of tuberculous processes in the bronchial glands, with lungs still intact, a reaction to the tuberculin and the absence of a reaction when the amount is reduced, would show that the lungs are still sound, while the occurrence of the lung reaction when the test is repeated later would indicate that the process in the glands had spread to the lungs The method might also prove important to exclude a pulmonary focus before a contemplated operation for some tuberculous process elsewhere. It may also prove useful to indicate the progress of transformation of an active into a latent process when, after the first reaction to 30 mg, larger and larger quantities are required to induce the reaction Bandelier does not agree with them, however, in regard to the possibility of inducing immunity by way of inhalation of tuberculin He gives in tabulated form the details of 38 cases in which the diagnostic inhalations of tuberculin were given

72. **Experimental Inhalation of Soot.**—Bennecke and Aschoff describe experiments which, they think, disprove the statements of Calmette and his school in regard to the intestinal origin of anthracosis of the lungs

73 **Tuberculin Reaction and Tuberculin Immunity**—Lüdke writes from von Leube's clinic that clinical observation has demonstrated that specific treatment with tuberculin does not cure directly, but merely arrests the processes or improves them The production of antituberculin can not be extensive when small amounts of tuberculin induce a reaction again after weeks or months The immunity induced by an injection of tuberculin is thus only a relative immunity, limited both quantitatively its ion He ascri
curative action of its
diseased tissue n
culous process
healing possible

74 Tuberculin Test —Roth Schulz states that the experiences at the great Beelitz sanatorium show that the sensitiveness to the tuberculin test is independent of the age and weight, debility and anemia not exaggerating the response to the test There does not seem to be any regular connection between the stage of the disease or its duration and the degree of sensibility to tuberculin The mild, "closed," initial cases seem to be especially susceptible An argument in favor of the specific character of the reaction is the frequency with which adults give a positive reaction, even without clinical signs of a tuberculous process, but autopsy reveals the latent focus, and, on the other hand, the rarity of a positive response in infants, corresponding to the rarity of tuberculous processes at this age Repeated administration of small, slightly increasing doses (0 5 to 2 5 mg) gives as frequently a positive response, he found, as the original Koch dose of 10 mg , owing to the cumulative action of the tuberculin.

75 Agglutination in Pulmonary Tuberculosis —Jessen of Davos has investigated the agglutinating property of the serum of 86 tuberculous patients, making 122 tests in all He found that the agglutinating power increased, after arrival in the mountains, without any specific treatment, and that the patients treated with tuberculin failed to show higher agglutinating power than those without As a rule, increased agglutinating power paralleled clinical improvement, but it declined as the case progressed to complete recovery Agglutination at 1 to 25 is the least proportion with diagnostic significance

Berliner klinische Wochenschrift

76 (XLIII No 40) *Ueber Hydrops toxicus H Quincke
77 Experimentell kritische Untersuchung über die Sahli sche Desmoid Reaktion S Saito
78 *Improvement of Leukemia by Intercurrent Infections —Zum Verständniss der Besserung der Leukämie durch intercurrente Infektionen C. Funck.
79 *Zur Behandlung des Trachoms mit Radium A. N Dinger (Amsterdam)
80 *Present Status of Epidemic Cerebrospinal Meningitis —Stand unserer Kenntnisse von der übertragbaren Genickstarre. M Westenhoeffer (Concluded)
81 (No 41) Experimente über hämatogene Lymphdrüsen Tuberkulose (of glands) P von Baumgarten
82 *Ueber Heissluft Therapie bei Emphysem, chronischer Bronchitis und Asthma bronchiale (treatment with superheated air) E Cohn
83 *Barberio s Reaktion auf Sperma. J B Levinson (Moscow)
84 Care of Abdominal Walls After Delivery —Zur Pflege der Bauchdecken nach der Entbindung P Brose.
85 Ueber die topographische Perkussion des kindlichen Herzens (of child s heart) A Mayer and R. Milchner (Senator s clinic, Berlin) Concluded.
86 Aetiologie und Epidemiologie der übertragbaren Genickstarre (epidemic meningitis) K. H Kutscher

76 Toxic Dropsy —Quincke believes that the action of toxins is responsible for the development of hydrops Myxedema is the most striking example, showing unmistakably the influence of autointoxication from some still unknown poison A toxic action is also evident in many affections accompanied by cachectic and essential hydrops, such as cancer, phthisis, scarlet fever, gastrointestinal disturbances and pernicious anemia. In nephritis, the tissue waste of the diseased kidneys is superposed on the stagnating metabolic products The poison acts not only on the walls of the vessels but probably also on the connective tissue, causing it to draw increased amounts of water out of the vessels In certain cases of nephritis salt may have this effect on the connective tissue, making it more avid of water Unknown local factors must favor the development of the edema at certain points, as in the face and eyes, in case of iodin intoxication The poison probably acts on the walls of the vessels, on the tissues themselves, on the nerves of the affected region (central or along their course), affecting the nerves of the vessels, especially those which regulate the size of the lumen and the permeability of the walls, and the trophic nerves which act on the tissue itself His article is based on the case of a man of 57 with pernicious anemia who suddenly developed general hydrops while showing marked improvement in his general health and in the composition of his blood The hydrops reached its maximum and declined again in the course of two weeks, in the third week there was a general scaling off of the epidermis, similar in every respect to that after scarlet fever The heart and kidneys were sound, and he regards the scaling as the expression of the general nutritional disturbances, the same as in scarlet fever, in which the scaling can not be regarded as merely the effect of the erythem.

78 Improvement of Leukemia by Intercurrent Infections.—Funck's patient was a man of 28 who had exhibited symptoms of myelemia for three months when signs of infection of a hydronephrosis developed. This subsided under treatment and with it the signs of myelemia The glands and the spleen returned to normal size while the blood picture showed marked improvement These facts Funck accepts as sustaining his conception of leukemia as a malignant neoformation in the blood forming apparatus An intercurrent infection summons the leucocytes to enhanced physiologic activity

79 Radium in Treatment of Trachoma —Dinger has given radium bromid a trial in the treatment of 16 cases of trachoma Seven patients were entirely cured, all the granulations have vanished. The younger the patients the more rapid and perfect the cure In the older cases and in those with pannus the recovery proceeds more gradually He regards the radium treatment as an improvement over caustics and mechanical measures as it is painless He used 5 mg of radium bromid, applying it for a minute once or twice a week, then lengthening the applications up to five minutes The total length of treatment ranged from one to three months All the patients had already been under treatment with other measures for from two to six years or more Not the slightest by effects were observed in any instance although scrupulous watch was kept for them

80 Epidemic Cerebrospinal Meningitis —Westenhoeffer closes his long study of the present status of our knowledge in regard to this disease with the statement that the inefficacy of all known methods of treatment justifies surgical interference It may be possible, he asserts, to ward off the subsequent hydrocephalus by evacuation of the pus collecting in the posterior and descending cornua This can not be done by lumbar puncture, only by drainage of the descending cornu, continued for several days, with thorough rinsing out of the cornua He advises operating at the middle or end of the second week, as the defensive reaction of the organism *may be assumed to be then at its height* As hydrocephalus in these cases almost invariably entails imbecility or death, he affirms that surgical treatment based on these rational grounds is justified and even demanded

82 Superheated Air in Treatment of Emphysema and Bronchitis.—Cohn has become convinced by examination of animals that the application of hot air to the chest draws the blood to the surface and takes it away from the air passages He found that this process had a favorable effect on bronchial asthma, chronic bronchitis and emphysema, and gives an illustrated description of a chair and chest for application of superheated air to the entire thorax.

83 Barberio's Reaction for Spermatic Fluid.—Barberio announced last year that the addition of a concentrated aqueous solution of picric acid to spermatic fluid causes the deposit of yellowish, rhombic crystals A drop of a saturated aqueous or alcoholic solution of picric acid is added to the suspected substance on the object glass, which is *carefully heated until* nearly dry, then another drop is added and heated, and so on, thus producing a concentrated solution Levinson has been testing the reaction and has found that the crystals can not be due to spermatozoa, but must be from the secretions of the prostate or seminal vesicles, as the reaction was positive even in cases of known azoospermia This confers great medicolegal value on the test, as it is the only one known to date which indicates the derivation of the suspected substance from the male genital organs in the absence of spermatozoa

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

87 (XXXII No 39) Treatment of Affections of Conjunctiva —Behandlung der Bindehauterkrankungen des Auges. Horstmann Clinical lecture.
88 Ein neues aseptisches Tropfglas (dropper and bottle) Peschel (Frankfurt a M)
89 Functional Tests of the Arteries —Zur Funktionsprüfung der Arterien O Müller (Concluded.)
90 Reply to Uhlenhuth Deviation of Complement and Differentiation of Albumin—Komplementablenkung und Bluteiweis, Differenzierung M. Neisser and H Sachs.
91 Zum saprophytischen Vorkommen hämoglobinophiler Bacillen C Klieneberger

92 *Russo s Methylene Blue Test. Ersatz der Ehrlichschen Diazo-Reaktion durch die Methylenblauprobe nach Russo R. Dunger
93 *Influence of Injections of Cholin on Pregnancy —Zur Beeinflussung der Gravidität mit Cholininjektionen. R. Werner and A. von Lichtenberg
94 *Treatment of Bladder Wound After High Incision —Ueber die Methoden der Behandlung von Blasenwunden nach hohem Steinschnitte. P Baratynski
95 Two Stab Wounds of Diaphragm.—Zwei Stichverletzungen des Zwerchfells. T Eichel
96 (No 40) Frühdiagnose und Behandlung der progressiven Paralyse. K. Heilbronner (Utrecht) Clinical lecture.
97 *Ueber primäre Tuberculose und über die Anthrakose der Lungen und der Bronchialdrüsen (bronchial glands) H Ribbert.
98 *Zur Differential Diagnose otitischer und metastatischer Hirn Abscesse (of brain) E Oberndörffer
99 *Zur Behandlung mediastinaler Tumoren mit Roentgen Strahlen. J von Elischer and K. Engel (Budapest)
100 Ueber Eventratio diaphragmatica. K. Lotz
101 *Zur Kasuistik des Gallen-Stein-Ileus (from gallstones) O Hermes.
102 *Ueber die Kuhnsche Tubage (intubation) A. Dirk.
103 Fall von Pruritus vulvæ geheilt durch blaues Bogenlicht (cured with blue arc light) E. Rothschuh.
104 Der Nachweiss von Crenothrix polyspora im Trink Wasser (in drinking water) O Rössler

92. Russo's Methylene Blue Test.—Dunger states that this test can by no means take the place of the diazo reaction as some have claimed.

93 Influence of Injections of Cholin on the Embryo —Several illustrations are given showing the destructive action on the embryo of repeated injections of cholin in gravid rabbits The results resemble those observed under the influence of *x* ray exposures of gravid rabbits, and are cited as striking arguments in favor of the assumption that the biologic action of the rays can be imitated by chemical means

94 Treatment of Bladder Wound After High Incision.—Baratynski reports the details of 4 cases to sustain his views that the wound in the bladder should be sutured at once after a high incision for stone in case the urine is normal and the mucosa of the bladder is healthy This should also be done when the urine is comparatively normal, with a neutral or slightly alkaline reaction, and even in case of mild cystitis, on condition that the latter receives thorough systematic treatment The bladder wound, however, should be left open in all cases of pronounced cystitis and with alkaline urine

97 Primary Tuberculosis and Anthracosis of the Lungs and Bronchial Glands —Ribbert argues that anthracotic foci in the lungs and anthracotic indurated bronchial glands are the terminal stages of healed tuberculous processes He also affirms that they must be the result of air borne inhaled infection He is convinced that the overwhelming majority of human beings are infected at some time with tuberculosis, but that only in the predisposed does it develop into a serious affection The majority recover and become comparatively immune.

98 Differential Diagnosis of Metastatic and Otitic Abscesses in the Brain.—In the case reported a young man with chronic otitis media for seven years and a gonorrheal bronchial affection for four years exhibited signs of an abscess in the brain. It was assumed to be in the temporal lobe, but no pus could be found, and autopsy revealed the abscess in the vicinity of the central sulcus in the parietal lobe Oberndörffer gives his reasons for assuming the abscess to have been of metastatic origin from the bronchial affection rather than from the otitis, especially the sudden onset of the symptoms, the afebrile course and the sudden appearance of contractions in the left arm, followed by paresis of the arm and leg on this side These symptoms appeared before there were any signs of compression of the brain. Comparatively little attention was paid to these motor symptoms as they were not very pronounced, and there was no characteristic progression of the spasmodic contractions The paresis in this case and the lack of involvement of the facialis might suggest a lesion of the internal capsule Another misleading symptom in the case was the paralysis of the ocular muscles, a frequent accompaniment of otitic abscesses in the frontal lobe

99 Roentgen Treatment of Mediastinal Tumors [illegible] describes 3 patients with mediastinal tumors much [illegible] by Roentgen exposures A fourth case [illegible] urges Roentgen treatment in all such cases, as [illegible] ment sometimes approximates an actual cure, although [illegible] more or less temporary Pure malignant [illegible]

most amenable to the rays in his experience, much more than tuberculous hyperplasia of the glands and lymphosarcoma

101 Gallstone Ileus —Hermes reports 3 cases which illustrate the freakishness of gallstone affections The patients were men or women in the seventies, two without any history of gallstone or gastrointestinal trouble In one case the intestine was found ulcerated and necrotic with several perforations and the patient succumbed soon after the operation The rapid development of these ulcerations, the first symptoms having been observed only three days before death, warns against too prolonged expectant treatment in such cases

102 Kuhn's Peroral Intubation.—Kuhn's method of administering the anesthetic through a tube reaching into the trachea has been duly described in these columns Dirk has used it in seven severe operations on the head The operator is rendered entirely independent of the anesthetist. There is none of the coughing, strangling or retching observed with other modes of anesthesia Asphyxia need not be feared, as the upper air passages are always free, and no blood can flow into the larynx or esophagus No bronchitis or pneumonia was observed afterward, and the anesthesia proceeded even and continuous without the usual ups and downs

Jahrbuch f Kinderheilkunde, Berlin
Last indexed page 1063

105 (LXIV Supplementary No) Residual Nitrogen of Human Milk.—Ueber den Reststickstoff der Frauenmilch H Rietschel.
106 Digestion of Albumin in Infant s Stomach —Die Eiweissverdauung im Magen des Säuglings L. Langstein
107 Eiweissabbau und aufbau bei natürlicher und künstlicher Ernährung (albumin metabolism) Id
108 Zur Kenntnis der stickstoffhaltigen Bestandteile der Säuglingsfäzes (nitrogenous constituents of infant s feces) H M Adler (New York)
109 Die Fettspaltung im Magen des Säuglings (splitting of fat in infant's stomach) J Parker Sedgwick (Minneapolis)
110 Die physiologische Bedeutung und der klinische Wert der Ehrlichschen Dimethylaminobenzaldehyd Reaktion im Kindesalter (in children) A Bookman (New York)
111 Zur Kenntnis der Beschaffenheit des Urins bei der Rachitis L. Baumann (New York)
112 Ueber den Wert orthodiagraphischer Herzuntersuchungen bei Kindern (the heart in children) [illegible]

Münchener medizinische Wochenschrift

thoroughly impressed with the possible evil consequences if she does not present herself for examination at stated intervals

116 **Artificially Induced Hyperemia in Treatment of Suppuration of the Ear**—Hasslauer reports extensive experience with Bier's technic, his opinion being that it represents a decided progress in the treatment of suppurative affections of the ear

117 **Peroxid of Hydrogen in Examination of Sputum.**—Sachs Mûke states that neither peroxid of hydrogen nor a 1 per 1,000 solution of corrosive sublimate interferes with the examination of sputum He preserves the entire day's output of sputum for examination It is treated with peroxid of hydrogen, which loosens up the mass completely, and it is then disinfected with the sublimate solution The whole can then be safely kept for examination, the sediment containing the essential elements of the sputum No further neutralizing or boiling is required.

120 **Prognosis and Treatment of Gallstone Affections**—Ritter is in favor of internal treatment of gallstone affections, and cites an array of statistics from Erlangen and Munich which show that the mortality is actually higher now in these operative days than it was when internal treatment and Carlsbad water were the mainstays A little oil or fat in the course of a rational diet is generally beneficial, probably mostly from its effect on the generally accompanying constipation and on the frequent hyperacidity The various remedies vaunted on all sides have one favorable point in common—they gain time Time is the great healer, but its beneficent effects are frequently ascribed to the remedy the patient happens to be taking at the moment

125 **Possibility of Intestinal Origin of Anthracosis of the Lungs.**—Schultze has been repeating the experiments of Calmette and his assistants at Lille in regard to the depositing in the lungs of particles of charcoal, etc., ingested by the mouth His results disprove their conclusions *in toto*, he asserts While the charcoal, etc., was being mixed with the food, the animals must have inhaled enough particles to account for the deposits in their lungs In his experiments, insoluble particles fed to the animals were found distributed through all the organs, never restricted to the lungs, in fact, the lungs contained less than the spleen and liver

126 **Importance of Intramuscular Nerve Tracts in Tendon Transplantation**—Wollenberg ascribes to the severing and other interference with the continuity of the intramuscular nerve tracts the variability in the results obtained in tendon transplantation The nerves follow the same course as the vessels, generally intimately interwoven with them, and in very few muscles is the direction parallel with the longitudinal axis of the muscle In most of the muscles the nerves and vessels run across the muscle, and consequently when a slice is taken off for transplantation, numerous nerves and vessels are injured He gives illustrations of the transverse nerve tracts in the biceps femoris and of the longitudinal nerve tracts in the gracilis muscle The practical conclusions of his research are that in slitting a muscle for transplantation, the part cut off must not be too small except possibly in those muscles in which the main nerve tracts are parallel to the longitudinal axis, and, further, that the muscle should not be slit higher than the middle of its belly

127 **Curability and Treatment of Tuberculous Meningitis**—Riebold reports a case of severe tuberculous meningitis with a favorable termination in the course of two or three months The patient was a girl of 16 and tubercle bacilli were found in the cerebrospinal fluid Treatment included lumbar punctures, repeated 24 times, daily during the first two weeks A total of 574 c.c. of cerebrospinal fluid was thus removed The syndrome was typical, plus marked disturbances in speech, probably due to local compression by the meningeal effusion, especially in the left fissure of Sylvius. In every instance the general condition improved remarkably after each lumbar puncture. Riebold thinks that the punctures should be repeated every day so long as the pressure is over 25 to 30 cm. water, so long as 25 or 30 c.c. of cerebrospinal fluid still escape with a terminal pressure of from 10 to 12 cm, and so long as symptoms indicate pressure on the brain, headache, etc. In a second case the patient, a lad of 7, was treated with 11 pun tures, about 355 c c of cerebrospinal fluid being thus wit drawn, under a pressure of from 27 to 45 cm The pati seemed to be much improved by the fifth and sixth punctu but after this his condition grew rapidly worse and he suc cumbed at the end of the third week. Autopsy showed tube culous infiltrates of the soft membrane, as thick as 0 5 cm almost exclusively localized in the vicinity of the hypophysi and of the fissure of Sylvius The tuberculous process seem to have been concentrated at this point and developed ther with great intensity As a rule, the patient dies before th infiltrates have reached this stage

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Books Received

Acknowledgment of all books received will be made in this colum and this will be deemed by us a full equivalent to those sendin them A selection from these volumes will be made for review a dictated by their merits, or in the interests of our readers

A PRIMER OF PSYCHOLOGY AND MENTAL DISEASE. For Use i Training Schools for Attendants and Nurses and in Medica Classes and as a Ready Reference for the Practitioner By C B Burr M D, Medical Director of Oak Grove Hospital (Flint Mich.) for Mental and Nervous Diseases, etc Third edition thoroughly revised Cloth Pp 183 Price, $1 25 net. Philadelphia F A Davis & Co, 1906

TEXT BOOK OF COMPARATIVE GENERAL PATHOLOGY for Practi tioners and Students of Veterinary Medicine. By Prof. Dr Th Kitt, of Munich Authorized Translation by Dr William W Cad bury, Assistant Demonstrator of Pathology in the University Pennsylvania. Illustrated with 4 colored plates and 131 illustr tions Cloth. Pp 471 Price, $5 25 net. Chicago W T Keen 1906

THE EAR AND ITS DISEASES a Text book for Students and Physi cians By S S Bishop B S M D, LL.D Honorary President o the Faculty and Professor of Diseases of the Nose, Throat and Ear in the Illinois Medical College etc. Illustrated with 27 col ored lithographs and 200 additional illustrations. Cloth. Pp 439 Price $4 00 net. Philadelphia F A. Davis & Co 1906

A TREATISE ON THE MOTOR APPARATUS OF THE EYES Embracing an Exposition of the Anomalies of the Ocular Adjustments and Their Treatment with the Anatomy and Physiology of the Muscles and Their Accessories By G T Stevens, M D Ph D Illustrated with 184 engravings some in colors. Cloth Pp 496 Price $4.50 net. Philadelphia F A. Davis & Co., 1906

RETINOSCOPY (or Shadow Test) in the Determination of Refrac tion at One Meter Distance, with the Plane Mirror By J Thor ington A.M. M D, Author of Refraction and How to Refract, etc. Fifth edition revised and enlarged, with fifty four illustra tions, ten of which are colored Cloth. Pp 67 Price $1 00 net Philadelphia P Blakiston s Son & Co, 1907

ATLAS OF CUTANEOUS MORBID HISTOLOGY Consisting of Fifty three Colored Figures on Twenty Four Plates and Text. By Dr Max Joseph Physician for Skin Diseases in Berlin, and J B Van Deventer Oberstabsarzt of the Netherlands East Indian Army in Batavia Java. Cloth. Pp 48 Price, $5 00 net. Chicago W T Keener & Co 1906

RECENT ADVANCES IN THE PHYSIOLOGY OF DIGESTION Deliv ered in the Michaelmas Term, 1905 in the Physiological Depart ment of University College, London By E H Starling M D. F R.S, Jodrell Professor of Physiology With twelve illustra tions. Cloth Pp 156 Price $2 00 net. Chicago W T Keene & Co 1906

ESSENTIALS OF HUMAN PHYSIOLOGY By D N Paton M D. B Sc. F R.C P Ed. Superintendent of the Research Laboratory o the Royal College of Physicians of Edinburgh. Second edition re vised and enlarged. Cloth. Pp 444 Price, $2 75 net. Chicago W T Keener & Co 1905

A HISTORY OF THE BOSTON CITY HOSPITAL, from its Foundatio Until 1904 Authorized by the Trustees and Edited by a Committe of the Hospital Staff David W Cheever M D George W Gay M D and others. Cloth. Pp 422. Boston Municipal Printin Office, 1906

PRACTICAL TEXT BOOK OF MIDWIFERY FOR NURSES By R. Jardine M D M R.C.S F F P, and S F R.S Professor of Midwifery i St Mungo s College Glasgow, etc. Third edition Cloth. Pp 27 Price $1 50 net. Chicago W T Keener & Co 1906

ESSENTIALS OF MEDICAL ELECTRICITY By E. R. Morton M D. C M Trinity University Toronto with eleven plates and sevent illustrations. Cloth. Pp 192. Price $1 50 net. Chicago W T Keener & Co 1905

STUDIES IN THE PSYCHOLOGY OF SEX. Erotic Symbolism th Mechanism of Detumescence, The Psychic State in Pregnancy B H Ellis Cloth Pp 285 Price $2 00 net. Philadelphia F A Davis & Co, 1906

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF THE STATE O ALABAMA (State Board of Health) Organized 1847—meeting c 1906 Cloth. Pp 688. Montgomery Ala. Brown Printing Co 1906

COOK COUNTY CHARITY SERVICE Fiscal Year, 1905 Descriptio of New Court House Annual Message of President Board of Com missioners and Reports of Departments. Paper Pp 127

THIRTY SEVENTH ANNUAL REPORT OF THE STATE BOARD O HEALTH OF MASSACHUSETTS Public Document. No 34 Clot Pp 626 Boston Wright & Potter Printing Co, 1906